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Vol. II

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1944

No. 21

CAROLENE PRODUCTS COMPANY, CHARLES HAUSER AND WILLIAM H. HARTKE, PETITIONERS,

vs.

THE UNITED STATES OF AMERICA

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE FOURTH CIRCUIT

PETITION FOR CERTIORARI FILED FEBRUARY 7, 1944.

CERTIORARI GRANTED APRIL 3, 1944.

SUPREME COURT OF THE UNITED STATES

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VOL. II

INDEX.

	Original	Print
Defendants' exhibit 27-B (for identification)—Report of Senate Committee on Agriculture and Forestry in re Filled-Milk Legislation (To accompany H. R. 8086)	615	1301
Defendants' exhibit 28-B (for identification)—Excerpts from Congressional Record in re Filled-Milk Legislation	628	1311
Order allowing certiorari	656	1394
Stipulations as to printed record	657	1394

JUDD & DETWEILER (INC.) PRINTERS, WASHINGTON, D. C., JUNE 14, 1944.

—2461

[H. R. 8086, Sixty-seventh Congress, second session.]

AN ACT To prohibit the shipment of filled milk in interstate or foreign commerce.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever used in this act—

(a) The term "person" includes an individual, partnership, corporation, or association;

(b) The term "interstate or foreign commerce" means commerce (1) between any State, Territory, or possession, or the District of Columbia, and any place outside thereof; (2) between points within the same State, Territory, or possession, or within the District of Columbia, but through any place outside thereof; or (3) within any Territory or possession, or within the District of Columbia; and

(c) The term "filled milk" means any milk, cream, or skimmed milk, whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated, to which has been added or which has been blended or compounded with, any fat or oil other than milk fat, so that the resulting product is in imitation or semblance of milk, cream, or skimmed milk, whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated, and as such is an adulterated and deleterious article of food, and when marketed as such constitutes a fraud upon the public.

SEC. 2. It shall be unlawful for any person to manufacture within any Territory or possession, or within the District of Columbia, or to ship or deliver for shipment in interstate or foreign commerce, any filled milk.

SEC. 3. Any person violating any provision of this act shall upon conviction thereof be subject to a fine of not more than $1,000 or imprisonment for not more than one year, or both; except that no penalty shall be enforced for any such violation occurring within thirty days after this act becomes law. When construing and enforcing the provisions of this act, the act, omission, or failure of any person acting for or employed by any individual, partnership, corporation, or association, within the scope of

his employment or office, shall in every case be deemed the act, omission, or failure of such individual, partnership, corporation, or association, as well as of such person.

Senator McKinley: I want to say to all the ladies and gentlemen present here that Senator Norris has selected a subcommittee consisting of Senator Ladd, Senator Kendrick, and myself, to enable all persons interested to have a hearing in connection with the so-called Voigt bill, H. R. 8086. There seems to be quite a number of people here that are interested, and perhaps it might be well for us to put right in the record the different interests or companies that are represented here.

Committee on Agriculture and Forestry.

George W. Norris, Nebraska, *Chairman.*

Carroll S. Page, Vermont.	Ellison D. Smith, South Carolina.
William S. Kenyon, Iowa.	Joseph E. Ransdell, Louisiana.
Charles L. McNary, Oregon.	John B. Kendrick, Wyoming.
Arthur Capper, Kansas.	Pat Harrison, Mississippi.
Henry W. Keyes, New Hampshire.	J. Thomas Heflin, Alabama.
Frank R. Gooding, Idaho.	Thaddeus H. Caraway, Arkansas.
Edwin F. Ladd, North Dakota.	
Peter Norbeck, South Dakota.	
J. W. Harreld, Oklahoma.	

Mabelle Talbert, *Clerk.*

Subcommittee on H. R. 8086.

William B. McKinley, Illinois, *Chairman.*
Edwin F. Ladd, N. Dak. John B. Kendrick, Wyo.

[fol. 474] Statement of Mr. Charles W. Holman, Executive Secretary National Milk Producers' Federation, Washington, D. C.

Mr. Holman: I am Mr. Holman, of the National Milk Producers' Federation. I have here a list of approximately 20 or more persons who desire to appear in favor of the proposed bill. Some of them will consume only one or two minutes apiece of the committee's time. Others will desire

to take a little longer period. With your permission I would like to make a short introductory statement, and then introduce our witnesses in the order that the proponents of the bill feel it best for them to come forward.

Senator McKinley: Who are here against the bill? Do any of the gentlemen or ladies present here oppose the bill? There seems to be no one here opposing the bill.

I find in the record that has been given to me by Mrs. Talbert, the secretary of the committee, a number of letters from people not exactly opposed to the bill but making some suggestions.

Statement of Hon. William M. Calder, United States Senator, New York

Senator Calder: I wish to file with the committee a letter addressed to me by Royal S. Copeland, commissioner of health of the city of New York.

(Senator Calder thereupon read the letter referred to, as follows:)

Department of Health,
New York, June 27, 1922.

Hon. William M. Calder, United States Senate.

My Dear Senator: My attention has been called to the fact that the so-called filled milk bill, which was passed by the House of Representatives on May 25, 1922, is now before the Senate. May I, therefore, submit the following facts to you for your consideration and ask your cooperation in the passage of this measure:

Within the past year or so there have been placed upon sale in this city products made from condensed skimmed milk and vegetable fat in the form of coconut oil. These products have all been sold under a trade name and sold in 1-pound tins, practically identical with the 1-pound tin in which condensed milk is sold.

While these products in themselves are wholesome, the finished products resemble condensed milk, and despite the fact that they are carefully labeled and the manufacturers contend that they are not being sold as a substitute for condensed milk, investigations have shown that they are being offered as a substitute for condensed milk. It is impossible to make any restrictive regulations which will overcome this

condition. To substitute a coconut oil for butter fat is against the best interests of public health for the reason that the nutritive value of coconut oil is inferior to butter fat, and, inasmuch as the butter fat in milk contains certain food elements vital to the proper growth and health of babies and children. In the opinion of the department there is no substitute for milk or butter fat.

These products can be sold at a cheaper price than can condensed milk, and inasmuch as there are a number of people in this city who do not understand the labels and who feel that they are buying a suitable substitute for condensed milk in purchasing these products, they are unwittingly depriving their children of proper nourishment. The department of health is opposed to any substitute on the market for milk or any milk product.

There is no question that the low death rate of this city is due to the good quality of its milk supply and also to the quantities in which it is consumed. If a substitute is placed upon the market and, as I have indicated there has been a tremendous sale of same, it will undoubtedly be reflected in the health statistics of this city.

I therefore feel that these facts should be carefully considered by the Senate and that the measure should be adopted.

Respectfully,

R. S. Copeland, M. D., Commissioner.

Senator Calder: I not only received this letter, but Commissioner Copeland was here two weeks ago and called upon me and urged very strongly the enactment of this legislation. I have had letters from other officers of our State, and also from our department of agriculture, calling my attention to this bill. They all seem deeply interested, those who have made a study of this subject, in having the bill enacted into law. I trust the committee will recommend the passage of this measure.

Statement of Mr. Charles W. Holman—Resumed

Mr. Holman: Charles W. Holman, executive secretary of the National Milk Producers' Federation. For the purposes of this hearing my office address is 1731 I Street NW., Washington, D. C.

The National Milk Producers' Federation, Mr. Chairman, is an organization representing nearly 200,000 farm ship-

pers of milk, representing 24 cooperative member associations, ranging from New England across the continent, through the dairy belt of the Pacific coast, and I am filing for the record a list of our associations and the directors of this organization.

(The list referred to is as follows:)

Member organizations: Dairymens' League (Inc.) and Dairymen's League Cooperative Association (Inc.); New England Milk Producers' Association; Inter-State Milk Producers' Association; Maryland and Virginia Milk Producers' Association; East Tennessee Milk Producers' Association; Summit County and Vicinity Milk Producers' Association; United Dairy Association of Washington; Kentucky and Indiana Dairies Co.; Queen City Milk Producers' Association; Ohio Farmers' Cooperative Milk Co.; Dairymen's Cooperative Sales Co.; Northwestern Cooperative Sales Co.; Michigan Milk Producers' Association; Southern Illinois Milk Producers' Association; Maryland State Dairymen's Association; Twin City Milk Producers' Association; The Milk Producers' Association and The Milk Producers' Cooperative Marketing Co. of the Chicago District; Milwaukee Milk Producers' Association; Louisiana and Mississippi Dairymen's Cooperative Association; Associated Dairymen of California; Oregon Dairymen's Cooperative League; Connecticut Milk Producers' Association.

Directors: Milo D. Campbell, Coldwater, Mich.; R. D. Cooper, Little Falls, N. Y.; H. W. Ingersoll, Elyria, Ohio; George Brown, Sycamore, Ill.; G. R. Rice, Milwaukee, Wis.; W. F. Schilling, Northfield, Minn.; H. W. Tinkham, Warren, R. I.; W. J. Kittle, Crystal Lake, Ill.; J. D. Miller, Susquehanna, Pa.; F. P. Willits, Ward, Pa.; R. C. Reed, Howell, Mich.; Harry Hartke, Covington, Ky.; J. M. Henderson, Sacramento, Calif.; P. S. Brenneman, Jefferson, Ohio; Richard Pattee, Newton Highlands, Mass.; J. A. Scollard, Chehalis, Wash.; J. G. Thompson, Landover, Md.; F. T. Holt, Kenosha, Wis.; H. J. Schultz, Shipman, Ill.; D. G. Harry, Pylesville, Md.; A. C. McMakin, Shelbyville, Ky.

Executive committee: Milo D. Campbell, W. F. Schilling, H. W. Ingersoll, Richard Pattee, J. D. Miller.

Mr. Holman: I also am filing by request, a list of 524 important national, State, and local organizations of farmers

and consumers who have asked for this legislation. This list represents practically every important farm organization in the United States, and a number of the larger national consumers' organizations.

(The list referred to was filed with the committee.)

Mr. Holman: I also wish to file this morning two telegrams which have just come in, one from Mr. M. D. Munn, of Chicago, Ill., president of the National Dairy Council, in which he says: "The National Dairy Council urges the passage by the Senate of the United States of the Voigt bill prohibiting transportation of filled milk in the interests of child and human welfare as well as the dairy industry of the United States."

(The telegram referred to was filed with the committee.)

Mr. Holman: Also a telegram from Mr. R. M. Gow, secretary of the American Jersey Cattle Club, in which he says:

"The American Jersey Cattle Club hereby indorses and urges the passage of the Voigt bill by the United States Senate."

(The telegram referred to was filed with the committee.)

Mr. Holman: I also desire to file for the record a short statement by me giving 10 important reasons why the farmers of the country desire the passage of the Voigt bill.

[fol. 475] (The statement referred to is as follows:)

"[Service Bulletin No. A-8.]

"Ten Reasons Why Congress Should Pass The Voigt Bill

"[By Charles W. Holman, executive secretary National Milk Producers' Federation.]

"The National Milk Producers' Federation,
"Washington, D. C., May 10, 1922.

"There are at least 10 major reasons why Congress should pass the Voigt bill (H. R. 8086), prohibiting the movement in interstate and foreign commerce of so-called filled milk.

"Here they are:

"Public Welfare.

"1. Labeling methods enable fraudulent practices to thrive.

"2. Many merchants in poorer communities have steadily and are still recommending imitation milk for the use of children and babies.

"3. Many merchants advertise imitation milk in the newspapers in plain language for genuine milk.

"4. While the product is inferior as a food, in most cases we have found merchants selling imitation milk at the same prices and even higher than they obtained for genuine evaporated milk, notwithstanding the cheaper price per case at which they obtained the imitation product.

"5. The present pure food and drugs act is not broad enough to cover the case. It necessitates additional legislation. The Voigt bill is written on the same general principles as the pure food and drugs act, but supplements it. Its enforcement will be intrusted to the Department of Justice.

"6. The Voigt bill is a children's bill; it bans the movement in interstate and foreign commerce of a compound that is vitaminless as to its fat content, but which is designed to take the place of a product rich in all the vitamins.

"7. Trading concerns have attempted to sell imitation milk to American organizations engaged in feeding children and mothers in Europe. Both the American Friends service committee and the American Relief administration have been approached to know if they would buy these compounds, and both organizations turned down the proposals.

"8. Dr. E. V. McCollum, of Johns Hopkins University, in his public statements points out that America is already suffering from defective nutrition, due in part to the commercialization of certain foods and the degerminating of cereals to enable them to keep longer. He also points out the growing use of vegetable fats—all of which are vitaminless—in the diet. He reasons from this that the substitution of imitation milk in the diet of either the child or the adult will have quite an effect in furthering the process of physical degeneration now going on.

"Economic

"9. This traffic, despite regulatory, restrictive, and prohibitory laws in 11 States—Colorado, Oregon, California, Utah, Wisconsin, Ohio, New York, New Jersey, Maryland, Florida, and Connecticut—has been steadily gaining.

"Production combined of case and bulk goods of filled milk was:

	Pounds
1919	64,995,221
1920	86,561,000
1921	1,461,140,312

"In this same comparative period the production of case and bulk goods of sweetened condensed and unsweetened evaporated milk was:

	Pounds
1919	2,030,957,648
1920	1,578,015,000
1921	1,461,140,312

"This shows a constant production for 'oiled' milk for 1921, as compared with 1919, and a steady reduction in volume of genuine canned milk amounting to over half a billion pounds, comparing 1921 with 1919.

"During that period the number of dairy cows has increased and the prices of all dairy products have fallen tremendously. In consequence the problem of marketing the surplus milk has become a very serious one for American milk producers.

"10. Canning whole milk is one of the best ways of helping to find a market for surplus. It enables the farmer or the manufacturer to seek wider markets and to effect gradual marketing. This medium is now seriously threatened by the advent of these compounds of skimmed milk and coconut oil. The manufacturer is enabled to purchase the coconut oil at 8 to 12 cents per pound—a price ranging from one-fifth to one-fourth the price of butter fat. Such a wide difference in production costs can not be met by milk producers. They are constantly faced with increasing expenses due to the increasing desire of both the producing and the consuming public for more sanitary milk products. The coconut oil comes from the South Sea Islands or the Philippines, and the gathering of the coconuts, drying of the

meat, and crushing them into oil is a relatively inexpensive process, since coolie labor is employed almost entirely in this industry.

"And, finally, 'oiled' milk does not offer farmers any additional market for their skimmed milk not already afforded by evaporated milk, but it does take away a market for their butter fats."

Mr. Holman: I asked the Department of Agriculture yesterday to furnish us with some statistics as to the production of filled milk in the current year, and they sent them over to me yesterday afternoon. These statistics——

Senator McKinley (interposing): Mr. Holman, have you got letters from these people on this list of 524 organizations, or have you simply taken your list?

Mr. Holman: This is taken from documents in our office.

Senator McKinley: Letters on this bill?

Mr. Holman: Practically all of them; yes, sir. They are verified documents.

Senator McKinley: I just wondered if for the record we should take a printed list of your members and put that in here.

Mr. Holman: Twenty-four of those only are member organizations. These are additional organizations, Mr. Chairman, that have indorsed the legislation, and that list is compiled from the records that have come into our office here in Washington—a verified list.

Senator McKinley: Would it not be well to bring in some of those?

Mr. Holman: We will be glad to do so.

The department figures show that for the first three months of 1922 there was manufactured 14,591,590 pounds of filled milk case goods, and 159,069 pounds of filled milk in bulk, making a total of 14,750,659 pounds of the two combined, as against a combined total of 7,444,000 pounds for the corresponding period of 1921.

That shows a possible doubling of the production this year compared with 1921, and brings out the very grave economic question facing the dairy industry. Other witnesses will present the case by sections, and we desire first to introduce the author of the bill, Representative Voigt, of Wisconsin.

Statement of Hon. Edward Voigt, A Representative in Congress from the State of Wisconsin

Mr. Voigt: Mr. Chairman, there are a great many people here to be heard on this measure, and I am not going to take up any more of your time than to make just a general statement. Some of the phases involved in the subject matter will be taken up in detail by witnesses who are present here.

Filled milk is a fraudulent substitute which has been placed on the market during the past few years, when there was a tremendous demand, on account of the war, for condensed and evaporated milk.

Filled milk consists of evaporated skimmed milk, with an amount, substantially, of coconut oil substituted for the butter fat which has been extracted from the whole milk. The average brand of filled milk contains anywhere from 6 and a fraction to 8 per cent of the coconut oil.

The process of manufacture is something like this: The men who are engaged in the manufacture of the genuine evaporated milk manufacture this product as what you might call a side line. There is no manufacturer of filled milk in this country who is not also engaged in the manufacture of the legitimate article, so far as I know. They extract the butter fat—that is, the valuable element in milk—and [fol. 476] then sell that for cream or make butter out of it. Then they condense the skimmed milk to approximately one-half its volume and add the amount of coconut oil by weight, approximately, which they have withdrawn in the shape of butter fat. The resulting mixture—that is, the filled milk—is an identical imitation of the genuine evaporated milk. If I were to open a can of genuine evaporated milk right here and a can of the substitute you gentlemen would not be able to tell the difference. The color of the product is exactly the same, the taste is exactly the same. In other words, these manufacturers have succeeded in putting a substitute on the market which has the exact appearance, taste, and color, and smell, etc., of the genuine article. I think that a liberal interpretation of the pure food and drugs act would bar this article from interstate commerce at the present time, but no test case has been made, to my knowledge.

The manufacturers of this product get around the pure food law in this way. They are not permitted, under the pure food and drugs act, to label this product "milk." They

can not use the word "milk" in connection with it on the label. So they have resorted to so-called trade names. I presume that some cans of this product will be presented to you gentlemen here later. The brand that has the largest sale is known as "Hebe"; that is, the word "Hebe," in big type, is put upon the can, with nothing else except——

A gentleman has handed me a can of this article just now. You will notice that it does not claim to be milk, but is called "Hebe."

I have here another can, made by another manufacturer, which is called "Nu-tro."

There are six or seven other brands on the market, to which your attention will be called later.

Now, this article, the evidence will show, is being sold very largely to ignorant people and to careless people. The grocers in the country are advertising this product as milk. You will notice that while the manufacturer can not call his product milk, there is no law to restrain the grocer from advertising it; from calling it milk, and there are thousands of cases in the country where you can find advertisements of large grocery stores calling this article, for instance, Hebe milk or Nu-tro milk.

The trouble with this product is that the valuable ingredient of the milk (that is, the butter fat) has been extracted. The butter fat contains to a large extent, the so-called vitamines, which Doctor McCollum, of Johns Hopkins University, will tell you more about, which are absolutely essential to the growth of the human body. The manufacturers of this article testified before the committee of the House that the contents of that 1-pound can of "Hebe" which the chairman is holding in his hand costs them a trifle less than 2 cents, whereas if that can were filled with genuine evaporated milk it would cost approximately 5 cents. In other words, there is a difference of over 100 per cent between the cost of the material that goes into this can and a can of the genuine article.

Now, it has been claimed by some that the fraud in the sale of this article can be restrained by compelling these people to adopt a proper label. I want to say to you gentlemen that it appears to be impossible to restrain the sale of this fraudulent product by a proper label, because there are millions of people in the country who are unable to read a label. There are millions of people in the country who can read a label who are too careless to read it. When

it is served in hotels and boarding houses and used in the manufacture of ice cream there is no protection to anybody. The only people who have tried to tell the public, in a measure, what this article consists of are the Hebe people—the people who manufacture this particular kind. They have endeavored to notify the public that it is not to be used in place of milk—in coffee, for instance—and they have endeavored to tell the people that it must not be used for infants, but the fact that it is used in infant feeding is not controverted, and it is a dangerous article to feed to a child. I think Doctor McCollum will explain to you that a child will contract disease if it is fed on this article instead of the whole milk or the evaporated milk. The evidence which will be produced here will show that this article is sold very largely to the poorer class of people. Now, in very many cases the retailer, although he buys this article for about 3 cents a can less than he does the genuine article, sells it for the same price that he does the genuine evaporated milk. In some cases they do sell it for a trifle less; but even though they do sell it for a cent or two less than the genuine article the buyer of this can is nevertheless defrauded, because he is not buying what he thinks he is. The fact that this article is used in infant feeding, although it is claimed by the manufacturers that it is not, was proven in a suit which is now pending in the Supreme Court of Wisconsin to test the constitutionality of a law forbidding the manufacture and sale of this article in Wisconsin. It appeared in evidence that mothers had written to the Hebe people and had told them what wonderful success they had had with this product in feeding infants. So the evidence that it has been fed to infants is direct and can be furnished directly from the manufacturers of this product themselves.

Now, you will notice the deception that is practiced by this can. This is a can of Nu-tro. It is stated here:

"Nu-tro. A compound of evaporated skimmed milk and refined coconut fats."

On another part of the label it is stated:

"Nu-tro is prepared in rich dairying sections of Indiana and Wisconsin, is made from fresh, pure cow's milk—with butter fat extracted and refined coconut fat added."

Now, then, that is technically a truthful statement, but the buyer who reads this label thinks that he is getting a

very rich and refined product which comes from the dairy farms of Indiana and Wisconsin.

I happened to run across a full page advertisement in the Chicago Tribune under date of October 3, 1920, of this one brand here, known as Nu-tro, in which they offer to give away a sample can to anyone who presents a coupon, etc. Now, I want to call your attention to what is stated about Nu-tro in this advertisement. Here is what it says:

"Nu-tro is a delicious and nutritious new milk product."

You notice they use the word milk there, but they dare not use that in connection with the name on this label because they would conflict with the pure food and drugs act.

Senator Ladd: May I ask you is that an advertisement by a retailer or by the manufacturer himself?

Mr. Voigt: That is an advertisement by the manufacturer. [Reading:]

"It is prepared in the rich dairying districts of Wisconsin and Indiana and made of pure, fresh cow's milk, with the animal fats extracted—"

Now, you notice they use here the word "animal fats" instead of using the words "butter fats"—

"and essential food values replaced by a refined, rich, sweet, pure, vegetable coconut fat."

They put the reader under the impression that there is something in milk, the animal fat, which may be deleterious, and they use a half dozen adjectives here in describing this wonderful coconut fat which they have substituted.

This advertisement says further:

"Nu-tro is pure, delicious, wholesome. It is prepared in model dairies from pure cow's milk, evaporated to double strength."

That is, they have taken the valuable constituent out of the milk, and they add that the milk has been "condensed to double strength" with the animal fat extracted, and then enriched with sweet, edible, highly refined coconut fat.

Now, I submit that no ordinary reader of that advertisement would get any other idea than that he was getting a very highly refined and edible, double strength milk product, when what he is getting in fact is something which, if he should feed it to his family, to his children, would

stunt the growth of those children and would result in disease.

The grocer keeps this article on the same shelf with the genuine product. It is put up in the same sized can and the whole impression on the purchaser is that he is buying an evaporated or condensed milk, and there is no way, gentlemen, to stop this fraud other than to prohibit the movement of this article in interstate commerce.

Senator McKinley: Is the coconut oil unhealthful?

Mr. Voigt: The coconut oil in itself, Senator, is not unhealthful, no more than if you were to go into a restaurant and call for a glass of milk and you should be handed a glass containing half water and half milk. There would not be anything unhealthful about it, would there?

Senator McKinley: No.

Mr. Voigt: But you would be defrauded, nevertheless. What I complain about in this product is not so much for what is in it as for what is not in it. The purchaser is being defrauded into the belief that he is getting a highly [fol. 477] valuable product, when he is getting something which is actually deficient in the vital element which is in milk, and there is not any way to stop this fraud except to stop the movement of this article in interstate commerce, which is as far as we can go. Ten or 11 States in the United States have already adopted laws which either prevent the manufacture and sale of this article entirely or which throw such restrictions around it that it is practically impossible to sell it.

Senator McKinley: Has Wisconsin such a law?

Mr. Voigt: Wisconsin passed such a law last year, and that law is now being tested out in the Supreme Court.

Senator McKinley: Does that follow your bill—that law?

Mr. Voigt: The objects of that law and this bill are the same, but the forms are necessarily different.

Senator McKinley: Would it not be well to put a copy of that right in the hearings?

Mr. Voigt: I can put a copy of the Wisconsin law into the record, but I doubt whether it would do this committee very much good, because the Wisconsin law directly prohibits the manufacture and sale, under the police power of the State. This bill does not prohibit the manufacture or sale, except in the District of Columbia and Territories and possessions, but it bars it from interstate commerce. The

United States Government has not the power, under the Constitution, to bar the manufacture of such an article within the limits of a State.

Senator McKinley: Will you put a copy of that in the record?

Mr. Voigt: I shall be very glad to do that, Senator.

The Wisconsin law is as follows:

[Ch. 409, laws of 1921.]

AN ACT To create section 1410b-7 of the statutes for the prevention of fraud and the protection of the public health, relating to milk, cream, skim milk, buttermilk, condensed milk, evaporated milk, powdered milk, and their fluid derivatives, prohibiting the introduction of foreign fats into them, regulating the sale of condensed and evaporated milk, prescribing penalties, and providing for the enforcement thereof.

The people of the State of Wisconsin, represented in senate and assembly, do enact as follows:

Section 1. A new section is added to the statutes to read:

"Section 1410b-7. 1. It shall be unlawful for any person, firm, or corporation, by himself, his servant or agent, or as the servant or agent of another, to manufacture, sell, or exchange, or have in possession with intent to sell or exchange, any condensed or evaporated milk which shall not conform at least to the minimum standards set forth in subsection 5 of section 4601-4a of the statutes, and which if contained in hermetically sealed cans does not bear stamped or labeled thereon the name and address of the manufacturer or jobber thereof or dealer therein.

"2. It shall be unlawful for any person, firm, or corporation, by himself, his servant or agent, or as the servant or agent of another, to manufacture, sell, or exchange, or have in possession with intent to sell or exchange, any milk, cream, skim milk, buttermilk, condensed or evaporated milk, powdered milk, condensed skim milk, or any of the fluid derivatives of any of them to which has been added any fat or oil other than milk fat, either under the name of said products or articles or the derivatives thereof or under any fictitious or trade name whatsoever.

"3. It shall be unlawful for any person, firm, or corporation, by himself, his servant or agent, or as the servant

or agent of another, to sell or exchange, or expose for sale or exchange, or have in possession with intent to sell or exchange, any condensed or evaporated or powdered skim milk in containers holding less than ten pounds avoirdupois net weight, and each said container shall bear the name and address of the manufacturer, distinctly branded, indented, labeled, or printed thereon, together with the word 'condensed skim milk,' or 'powdered skim milk,' as the case may be, in Roman letters of a size at least as large as any other words or letters appearing on said brand, indentation, or label.

"4. Any violation of any of the provisions of this section is hereby declared to be a misdemeanor and any person, whether individually or as a member of a partnership or as a responsible agent or officer of a corporation who shall be convicted of such violation, either on his own behalf or in the interests of a corporation shall be punished by imprisonment in the county jail for not less than thirty days nor more than sixty days or by a fine of not less than $50 nor more than $100, or by both such fine and imprisonment.

"5. The dairy and food commissioner, by himself or by his assistants, chemists, inspectors, or agents, shall be charged with the enforcement of the provisions of this section.

"6. Nothing in this section shall be construed to prohibit the shipment into this State from a foreign State and the first sale thereof in this State in the original package intact and unbroken, of any of the products or articles, the manufacture, sale, or exchange of which or possession of which, with intent to sell or exchange is prohibited hereby.

"7. Should any subsection or subsections or any part of a subsection or subsections of this section become or be declared to be inoperative or void for any cause or reason whatsoever, the remainder of the subsection or of such subsections shall be and remain in full force and effect.

"Sec. 2. This act shall take effect ninety days after passage and publication.

"Approved June 21, 1921."

Mr. Holman. The next witness, Mr. Chairman, is Miss Laura Cauble, nutrition expert of the Dairymen's League Cooperative Association (Inc.), New York City.

Statement of Miss Laura A. Cauble, Nutrition Expert, Director of the Bureau of Nutrition, Dairymen's League Cooperative Association (Inc.), 303 Fifth Avenue, New York City.

Miss Cauble: In 1922, at the biennial election of officers for the Federation of Women's Clubs of New York City, there was a general reorganization of the committees in the federation. There had long been a milk committee, but it had been inactive. In the progress of reorganization of the committes one of the most active and energetic women of the city of New York, Mrs. John Marshall Gallagher, was given the chairmanship of the milk committee. She asked me to serve as her counsel. At that time I was doing commercial research and serving as advisory counsel. I worked with Mrs. Gallagher, who will speak to you later, on a general survey of our New York City milk problem, including milk products of all kinds that are being produced, manufactured, or sold in the city of New York.

Senator McKinley: Miss Cauble, did you testify at length before the House committee?

Miss Cauble: I did not. I was not there; the record there would answer that.

I will give you a summary of our report which we think should give you sufficient reasons for passing this Voigt bill. I will file with you photographs of an exhibit of filled milk which is in my office bought by our investigators as evaporated milk. I have been working with the Dairymen's League since December 15, 1921, as head of the bureau of nutrition, and I will show you how the marketing of this food in the city of New York and in its environments, and particularly in any of the industrial districts of this country, becomes a menace to public health because it is an imitation of pure milk, and is substituted for it by the ignorant and poor who are living too near a deficiency diet. Even I, an expert in foods (I qualify as an expert of domestic arts, since I hold a degree from Columbia University in domestic science and have had years of experience) can not tell which is which, except the article becomes stale. When it is old I can tell by the odor, but when it is fresh and new there is nothing to tell me by sight, smell, or taste that the product is or is not filled milk. Nothing but the test tube reveals it.

How did filled milk so quickly secure its market? During

the war there was the most extensive campaign on saving the butter fats. "Save the butter fats." "Do without butter fats so that the children in France may have the nourishing fat which will produce growth." "They will starve without." "Do without butter fats so that the boys in our Army may have the butter to give them stamina and resistance to disease; use these substitutes."

Now, on the basis of that great program which was carried on throughout this country this product slipped into the market. Our program of "doing without" and of using substitutes got fixed in the minds of the poor so that they really do not realize it quite as they would have if this [fol. 478] substitute had found its market normally or under normal conditions. We have had no chance to educate the people concerning its true value purely as a fat for frying and energy food and its danger as a substitute for milk in the diet.

The advertising campaign is constantly in progress. I have here the Journal of Commerce and Commercial Bulletin, recognized all over this country as the most authoritative market paper, of June 27, 1922, this last Tuesday. This firm's advertisement appears every Tuesday in this paper. It is read by the trade, and it goes out in the small trade papers. This advertisement reads: "It's nationally advertised." That is the idea, "We do the advertising for you. You do not have to talk about your goods."

"The grocer who stocks Hebe is certain of liberal advertising support. Hebe has been consistently advertised in the magazines ever since it came on the market, and the demand has been steadily growing.

"Hebe is now an accepted article of convenience and economy. It is an ideal cooking liquid—pure skimmed milk, evaporated to double strength, enriched with vegetable fat. Used in cooking, it does three things—it moistens, shortens, and enriches." Here is the crux of the matter: "Stock Hebe and take advantage of the extra profit. Send for booklet 'What you don't know about Hebe.' The Hebe Co., 71 Hudson Street, New York City; Chicago; Seattle."

I submit this copy of the Journal of Commerce as typifying the spirit of the advertising campaign.

"Get the profit." "It is for cooking." "It does three things—it moistens, shortens, and enriches." Yes; it also does a fourth thing—it takes the soul out of our funda-

mental food. You can make food products out of Hebe which look well, smell good, and have a delicious flavor—yet the soul of the food is stolen.

Here is the little Hebe book, "Use it for cooking." Senator Ladd knows, and I know, and we all know that there is a great basis of invisible food supply which we do not want tampered with. Milk is hidden in almost everything you eat. We still use the old-time ways of preparing our vegetables, our meats, and our sweets, and put milk into all food products possible to carry the nourishment, as our grandmothers and as our mothers did. The housewife who knew how to raise a good family of children put milk into everything she could get to cook with. Out of that grew up the recipes which are just the written expression of common experience with these substances that go in these forms to make good edible nourishing products without the waste of experimentation.

Let us look at the Hebe cookbook. I qualify as an expert on cooking. I can cook well and know good cooking when I eat it. I know how to teach it. I have my degree from Columbia University in domestic science—was head of the department of household arts, Carnegie Institute of Technology, for three years. You will remember, on the label of these cans it says, "For cooking, and not for coffee." I don't care anything about how much Hebe men and women eat in coffee. Coffee is a stimulating drink for grown-ups—not for children. This is entirely a catch in their advertising. Here are breads. Children eat breads. Here is a recipe for "fine nut bread." It is advertised as a "fine nut bread." They use three-quarters of a cup of Hebe. The quantity of bread produced would be two small loaves. I ask you if three children could not eat two small loaves in a day in that home. When Hebe is put into that bread the children are cheated of growth material of three-quarters of a cup of pure evaporated milk or of 1½ cups of wet milk.

In their "corn bread" there is a half a cup of Hebe and a quarter of a cup of water, or the equivalent of a cup of wet milk. The food value of the loaf is reduced in its protective vitamines. You take the reduced quality of the flour and corn meal that is put into that loaf and the reduced quality of the milk and you begin to get stuffing instead of bread. This cheats the children.

The same way with their gingerbread recipe, one-half cup of Hebe. It is the same with their cookies, three-quar-

ters of a cup of Hebe. Who eats the cookies in the family? Not the grown-ups. The mothers make cookies for the children—one more cheat.

We have constantly in our schools of home economics been trying to get over the idea that the cream of vegetable soups contain all the varieties of nourishment that are necessary to sustain a child's body, to build teeth, bones, and tissue. This is largely because of the milk that is contained in the vegetable soup. Here is the Hebe recipe for cream vegetable soup, 1½ cups of Hebe instead of 3 cups of milk. Whether the children are cheated out of the glass of milk that they should drink each meal is not the question here. It is a question of how they are cheated out of this other invisible supply of milk which has constantly been on our tables for our children ever since we began to create the type of men America has produced.

Next is a recipe for scalloped potatoes. Then comes "clam pie." Then they give a recipe for cream sauce "to keep in the house ready for all emergencies," so the woman does not have to cook it every day. Then there is a custard sauce and custard. For whom do we prepare custard? It is for the children, not for the grown-ups.

Then there is cocoa. You gentlemen don't care about cocoa; I don't. Cocoa powder in itself is a waste product of the chocolate manufacturers as a matter of fact. They sell what they can and burn the rest to get rid of their surplus, just as they used to burn sawdust in the lumber mills. I know where it is burned. Cocoa powder has a pleasant flavor, is a little bit nourishing, but the nourishment in the children's cocoa is in the quantity of milk used in making it. The flavor entices the children to eat the milk.

I submit this Hebe book as a part of the evidence that the product Hebe is really advertised as a food for children, because it is used only in recipes for all foods for children. No new ways of using Hebe outside of the regular family recipes is suggested. No way of cooking with it for grown-ups only has been suggested in any of their recipes. (The pamphlet referred to was filed with the committee.)

Here is a page from the Ladies' Home Journal. It costs something to advertise in the Ladies' Home Journal. The Hebe Co. pays for it. The grocer does not have to advertise. This is on the reading table of nearly every farm and city home in the country. It is the most widely distributed, most expensive advertising medium in the whole country.

Here are some recipes. We have new potatoes in white sauce; chipped beef in white gravy. (There is not very much nourishment in chipped beef, but it is palatable.) Both recipes are another way to get people to eat milk.

Chicken a la king. That is not a children's food, but they sometimes eat it. Old-fashioned rice pudding. Whom do we make that for? For the children. So their statement that they do not put in into foods of children and they do not advertise it for the use of children may stand up under the inspection of an ignorant person, but it would not stand up under the inspection of a Senate committee, because it is not true.

Although the label says it is not to be fed to children it is fed to children; you can not get away from it; thereby it is utterly undermining the invisible food supply of our country. Just consider the quantity sold in pound cans—12,000 pounds in 1916, 84,000,000 pounds in 1920—and the rapidity with which the market has grown. We can not prevent the sale by the ignorant; we can not stop the ignorant from using it. Commissioner Copeland has stated in his letter to Senator Calder, June 27, 1922, that the department of health of New York City can not give enough inspection to prevent the fraudulent sale of it in our market.

The great market for "filled milk" in New York is the 1,700,000 children under 15 in the workingmen's families of the city of New York. Can the manufacturer protect the consumer against the imitation? Can the manufacturer prevent the fraudulent sale? Can the manufacturer stop the menace to public health? Only by stopping the manufacture of filled milk.

Now, I want to tell you how we got the findings and material of our exhibit, because when you are presented with material you want to know that it is authoritative. The milk committee of the Federation of Women's Clubs went out and found the findings of our survey, proved that milk is not offered for sale at any of the stores patronized by the rich and well-to-do. I could not find it in one single shop in New York where the rich buy, and there was one other district in which I could not find it. There is a district down in the crowded center of New York in which Miss Lillian Wald has for 25 years gathered about her in her work of the Henry Street settlement the most intelligent trained nurses in this and all other countries, who have come there to learn what a nurses' settlement can do for

a crowded city. They get their training and go out and establish these centers in other cities. She has been carrying on this work for 25 years, and my investigator, who reported to me daily, came back to me one day and said. "Miss Cauble, I couldn't get any filled milk to-day." I said, "Is that so?" I said, "Where did you go?" (I had sent her there deliberately.) She said, "I began at such and such a street, and I went to so-and-so, and I couldn't find a bit." I said, "Do you know why?" I said, "That is [fol. 479] the result of the 25 years of education." You can not buy filled milk there, and there is not very much evaporated milk sold there, but what there is it is all of a high quality. You will find Borden's there, and you will find Carnation there (which is made by the same company that makes Hebe). You will find people buying wet milk, because this fact has been pounded into the mothers of this district. * * * "Feed your children right and you will have men and women"—the result is that the children are growing in better stature and better general physical condition than their parents. The material was gathered by special investigators, department of health and school nurses, teachers, dietitians, mothers' clubs, federation of women's clubs, and settlement workers. These women know, gentlemen, in 25 years we are going to raise a generation of men for the next emergency in our country, and the women of this country now ask that the coming generation have the same chance that our forefathers had and that we had in getting a rational diet of well-balanced food. If it takes laws to protect, give us the laws. We can educate families out of using filled milk in 25 years, but we don't want to lose 25 years of growth in stature and the Nation's manhood.

This is the situation in the city of New York. We have 1,700,000 children under 15 years of age, a total of 83,300 food dealers in the city of New York, with a food inspection staff of 99 city inspectors, and an area of 321.9 square miles to be covered. How are you going to watch this product and prevent the illegal sale of it? We have 500 miles of water front and we have adjoining States which have no law to protect them, therefore, we ask that we be protected by interstate law. No inspection service, no education service can keep pace with this menacing growth.

I want to make the statement that in New York City and in the locality of New York, in New Jersey, and in Albany,

right under the nose of the capitol, the morning of the hearing at which we presented the evidence which gave us a unanimous nonpolitical vote on the filled milk bill, we bought all the filled milk we could carry as evaporated milk. The only reason we did not have more was not because we could not get more, but was because we could not get a taxicab to carry it. It was sold everywhere in the industrial centers as evaporated milk, and was offered first in preference to the pure evaporated milk. These are some of the statements that the retailers made to my workers:

"It's good. We sell more Hebe than any other."

"Better for puddings than fresh milk."

"Just as good as other."

"Sells more than any other."

"Sells by the dozen to one customer at one time."

The customer that bought them a dozen at a time was a boarding-house keeper who kept a boarding house for working people. They ate it and thought they were getting milk, and they went to work tired and hungry and didn't know what was the matter with them.

"Said it was certified by the board of health." (It is not.)

"Good for everybody. Of course, they buy it when they can save a little. (This dealer was selling it from 1 to 2 cents a can cheaper than the pure evaporated milk. Nyko 10 cents, Borden's 12 cents.)

"One lady gets 2 dozen cans at a time." (I looked her up and found she was a boarding-house keeper.)

"It's good for babies."

"It's good and all right for children."

"Yes; it's good. Some purchase six at one time."

"Good as the rest and same price."

"It's a new firm. That is why it is cheaper. It's as good as Borden's for you only pay for the name in Borden's."

"Good; same as any other for any use."

"It is good fresh milk and we sell plenty of it."

"It is very fine milk."

"It is made by the Lion Brand Co., and it is good milk. I sell plenty of it."

"It is just the same; you can't tell the difference."

"Hebe is good, the best milk in that line. This man showed me a large window with a display of several varieties of pure evaporated milk."

"It is good. You can't see the difference when you open it."

"I sell much. This lady (pointing to a customer) buys it here. She says it's good."

"It is good. I sell it to people who have children."

"I sell 6 boxes of Nyko to 1 of any other. Nyko is good for children. Just as good."

"Sells much. People give it to children."

"We sell quite a bit of it. Of course, it is good for children."

"It is as good as the other. It is good for children."

"It is as good as the other, and I recommend it for children."

"The label doesn't count. There is the crux of the matter—the label doesn't count."

Who got the evidence? Several investigators of the bureau of nutrition, Dairymen's League (Inc.), of the milk committee of the New York City Federation of Women's Clubs; of the Women of State Clubs, in reports from resident workers in settlements; in reports from mothers' clubs in public schools; reports from city dietitians; reports from residents of the districts who have bought the foods; reports of visiting nurses who have charge of work in public schools; the social service department of a city hospital. They turned over to me their records for my inspection. They said, "Of course, it is a menace to health," and I took 1,000 or 1,500 cases and looked them over. "Under-nutrition," "malnutrition." They had been eating food sold to them as evaporated milk. They went into the market and bought what was sold for evaporated milk. Yes, but it was Hebe and Nyko and Carolene and all these other substances which have not the nourishing qualities of the ordinary evaporated milk.

How did these people get this information? They communicated with the nurses, dietitians, and mothers. They visited shops and bought it. They observed sale and purchase methods. They actually bought filled milk as evaporated milk wherever the low-salaried or working class buy. They conversed with the retail dealers who buy and sell the stuff. They conversed with the retail dealers who have had the stuff in the past, but will not carry it now. They conversed with retail dealers who never sold it. Whenever I thought there was a doubtful case, I followed it up myself, and in one instance here you will notice there is a can of

Hebe sold at 18 cents. I bought that. The grocer remarked, "you always want the best." The girls in my office laughed at me. They said, "Your hat was too good. They charged you a big price for that can." We went into one shop and asked for evaporated milk. The woman said, "I am not selling that stuff any more." "Why?" "Why should I sell that stuff, when the other is as cheap as it is now and you can make a reasonable profit on it?"

Now, gentlemen, inasmuch as this great business arose during a national crisis, when the whole Nation was paying for the advertising, and inasmuch as this food is produced and the sale of it is propagated and is being rapidly extended by great business interests in this country, and inasmuch as they are paying for all the misleading advertising that goes out, the magnitude of the business is an added Nation-wide menace to the health of the children of the workers of the Nation. We had been asked by the food administration to do without butter fats. Our women loyally supported this order. Now we think the time for doing without has come; that we are in a period of reconstruction and that the manufacturers of this product should meet the conditions. About $3,000 is all that need be invested in machinery for making "filled milk." They can easily afford to discard this and make nothing but pure evaporated milk or dry skim milk in their plants. We think these manufacturers should do their loyal duty as citizens of this Nation and turn to making good milk, either evaporated or dry skim milk, and let us show the people how to use it. We also think the time limit for doing without butter fats and pure evaporated milk has come, and so we ask that we receive the support of our Government in trying to protect our people from this menace to public health.

You will remember the report of the condition of our picked boys in the Army was that 80 per cent of them were physically defective, and that 85 per cent were of a low intellectual standard. We women of this country have taken that very seriously to heart; we bore those boys and we have determined to face our responsibilities, that nothing shall stand in the way of the proper birth, the proper nourishment and the proper education of children. Our slogan in the city of New York, with 300,000 women backing it is, "Hands off of milk." We want pure milk. We are going to protect it, and we ask you to give us this

law as a necessary guarantee of protection to our people.

I wish to file these photographs of our samples of filled milk sold to us as pure evaporated milk, which can be attested to by my associates who will speak later. These are [fol. 480] some cans of milk which were bought in the city of New York and they indicate the prices at which the different kinds of milk were bought on the same day and in the same shops.

This is the story of the New Jersey market. We have a filled milk law in both states. We hope to have the support of our Government in this Federal law.

I wish to read two or three letters from physicians of national reputation.

Senator McKinley: Why not let them go in the record without reading?

Miss Cauble: Very well.

(The letters referred to are as follows:)

June 28, 1922.

My Dear Miss Cauble:

My attention has been called to the fact that in the near future an attempt will be made to control by legal measures the manufacture of the food known as filled milk. The problem of undernourishment, with its resulting effect upon public health, is serious enough without the addition of new problems. There seems to me no good reason why a spurious article of food, purporting to be milk and bought as such, should be manufactured at all.

It is common knowledge of physicians and of their patients that pure milk is the best possible food for pregnant women, nursing mothers, and growing children of all ages. Filled milk is milk from which the animal fat in the form of cream has been removed and its place supplied by emulsified coconut oil or some other vegetable fat entirely different in character. The resulting filled milk is entirely lacking in the food value which normal milk possesses. This filled milk can therefore be sold at lower prices than good cow's milk. It is bought largely by the poor and the ignorant, who are not aware that they are buying a fraudulent product, and the result is that in their relatively large families the greatest damage is done.

The manufacture and sale of filled milk is a menace to the public health. I am heartily in favor of the bill to stop the

transportation of filled milk in interstate commerce. I wish it were in my power to stop its transportation and manufacture altogether.

Sincerely yours, Henry P. de Forest.

Miss Laura A. Cauble, *Dairymen's League Cooperative Association (Inc)., 303 Fifth Avenue, New York City.*

June 28, 1922.

MY DEAR MISS CAUBLE:

From my viewpoint as a specialist in the diseases of children and professor of pediatrics at the New York Post-Graduate Medical School I wish to state that it is my belief that milk from which the cream has been removed and other fats substituted is a deficient food. Cow's-milk fat contains vitamines which are invaluable to the growing child, and no other fat can wholly take i-s place.

Any legislation which would prevent the sale of so-called filled milk would be of great benefit to children, especially the children of the poor.

Yours very truly, Roger H. Dennett.

Miss Laura A. Cauble, *303 Fifth Avenue, New York, N. Y.*

I wish to give you a message from Dr. Graham Lusk. He told me if he were not abroad he would be here on his feet supporting this law with all the strength he had in him, because he considered it one of the greatest menaces that has ever arisen in our country in the period of its existence.

Senator McKinley: I have a telegram that has just come in here from Chautauqua, N. Y., which reads:

"We, the undersigned, attending the general Federation of Women's Clubs at Chautauqua, New York, at a conference on legislation held in the Cary Hotel, June 28, 1922, expressed our disapproval in the Voigt bill in the present prohibitory form, but favor legislation which would require that compounds of evaporated skimmed milk and vegetable fats be packaged and labeled in such manner fully to inform the public as to their ingredients and proper uses, and further, to provide that these products are not to be sold as food for infants."

That is signed by a number of people.

Miss Cauble: May I make a statement about that?

Senator McKinley: Yes.

Miss Cauble: May I ask the names?

Senator McKinley: There it is. Look at it yourself.

Miss Cauble: They are individuals. It was not a vote of the federation, you understand.

Senator McKinley: I don't understand anything but what that says.

Miss Cauble: Personally they objected to it. Am I permitted to speak of some correspondence which was sent broadcast?

Senator McKinley: I wanted to bring it up while you were here, because you are a woman, and this is signed by a number of women.

Miss Cauble: A letter was sent to the chairman of the home economic committee of the Federation of Women's Clubs in this country by the interests who are backing Hebe. It was bought and paid for.

Senator McKinley: That is, these women were all bought, were they?

Miss Cauble: No. These women were ignorant. The letters came to them asking them not to block the business of the country which was necessary for our common interest; in a crisis that this was a good business, and it was going to take care of the skimmed-milk production of the country; it was "going to help the farmers." The farmers know how to save their skimmed milk. They dry it and make pure milk products and we teach the women of the country how to use them. Let these people sell us their coconut fat, and we will teach the women of the country how to use that. There is substantial energy food value in coconut fat; it can be used for frying but it is not fit for food for children. It is dangerous to health to combine it with milk in any form because of the loss in protective value of the butter fat.

Senator Ladd: I think there is one point not brought out clearly. You say you are condemning Hebe and these products because they do not contain as much nutrition. It is true that there is a difference in the food value, the number of calories between the fat in Hebe and that in milk, for the same amount.

Miss Cauble: We are not measuring our food in calories any more. That is the heat unit. You don't want any more heat on a day like this. We are not measuring it on protein, carbohydrates and fat, but we are measuring foods

to-day and we are teaching the women to measure foods in the materials that will produce growth, growth of teeth, growth of bone, growth of muscle; that is, growth of all the cells of the entire body, as protective foods for stimulating growth—foods to supply the functions of the body, which briefly set forth is to choose the food according to the nature and need of the child so that each child may have the best chance possible to attain his optimal growth. Doctor McCollum will speak to that point. I did not touch on that for that reason. We are absolutely and busily engaged in teaching this to our women, to mothers, to prospective mothers, to club women—I speak to mothers' clubs in our city once every day in the week. To choose the protective foods first, then, enough more of foods to secure an adequate quantity. Filled milk can not be substituted for a protective food, because coconut fat has no growth-stimulating qualities. For the homemaker filled milk is an indetectable imitation of our best protective food. When it is used in any way now known it crowds our best protective food out of the diet.

I want to show you our treasure box. I assure you this is a heavy thing to carry around on a hot day. I ask you, will you let me have them back, because I want to show them to 12,000 farmers to-morrow. I want you to see our samples of filled milk and see how we have labeled them.

There are two cans that sell for 15 cents each. There is not 1½ cents' worth of food in either of them. This is bought by the poor people. They should be able to buy a pure product at 15 cents. The little girl I sent out, who did the best investigation for me, put on an old dress, and she looked like a poor working mother who was doing her best. She brought in most of this. You will notice it says "good for cooking and baking," but not to use for coffee. Every one of them has a statement that it is good for certain things, but the label doesn't count. I just wanted you to see the care with which we collected our samples and labeled them. There is not a single one of them that can not be sworn to by those two women and by the 300,000 other women of New York who have listened to our report and who have unanimously adopted the resolutions supporting the Voigt bill at the annual meeting of the Federa-[fol. 481] tion of Women's Clubs, in the city of New York, in February, 1922. There are nine of the strongest clubs

in the city of New York which are actively backing the milk committee in support of this work. The others indorse the bill. Give us this law. I am afraid I am speaking at too great length.

Mr. Holman: Before introducing the next witness, who will take only three minutes or less, I would like to explain that at Chautauqua for the past 10 days a hired agent of the Hebe Co. by the name of Mrs. Grace Viall Gray has been working among the women.

Senator McKinley: Who is this lady who was just talking?

Mr. Holman: Miss Laura Cauble.

Senator McKinley: By whom is she hired?

Mr. Holman: The Dairymen's League.

Senator McKinley: When you say "hired agent," Miss Cauble is a hired agent also.

Mr. Holman: And I am a hired agent of the farmers.

Mrs. Gray attempted to get a resolution presented through the General Federation of Women's Clubs against the bill. The resolution was referred to the committee on home economics of the federation; and it was decided that as the subject was so new to the ladies, and they wanted to put their influence back of the Sterling-Towner bill, they would not report out any resolution.

The next witness is Mrs. John Marshall Gallagher, of New York City, at the head of the New York City Federation of Women's Clubs, of some 300,000 women.

Statement of Mrs. John Marshall Gallagher, New York City

Mrs. Gallagher: Mr. Chairman, when I was asked to take the chairmanship of this committee I was rather doubtful at first about taking it, because it was such a tremendous undertaking and it had never been developed in any way in New York City. I had known Miss Cauble at Columbia University and in Pittsburgh and as deputy commissioner of public markets in New York City. I said that I needed expert advice, and I asked her if she would serve as my counsel. She consented.

It is the opinion of the director of the federation that there should not be anything commercial or political in any of our committees. Miss Cauble had already completed this work when she took her position with the organization in which she is employed at the present time. I studied the

situation also in Chicago, where I had been on the Chicago Women's Club, and I decided that it was almost too much for me to undertake; but, of course, Miss Cauble told me that she would help me, that she had leisure, and I was very glad to have her. We took the proposition up. We went at it very thoroughly. We discovered undernourished children, children suffering with rickets. We discovered this filled milk. I discovered the Hebe milk. I inquired of different hospitals, Doctor Copeland, the nurses, and did everything possible to try to find out why. I understood, of course, that every housekeeper, no matter what her circumstances are, is anxious to cover her budget, and sometimes she would buy with perfect faith in the filled milk, but did not know it was not good. After Miss Cauble tested it and found out what it was, we discovered that it was not the proper food. The doctors all say—my own physician says, "Why, it is a terrible thing."

These people can make their profit on something else. I don't care where they make their profit, but they must not make their profit on the children, our future citizens. You and I and everybody else knows that we should drink a quart of milk a day, and the children must drink a quart of milk a day if we expect to make and keep them healthy and strong, and I hope in the public schools to be able—I may not do it this year, but I will do it, I am sure, before I am through—to give the child from the poorer districts four glasses of milk a day.

These Italian mothers that buy the filled milk can not read the labels, but it is recommended by their grocers, and they will buy it and give it to their children. They have been known to give coffee and tea to their children. The children come back from school and say, "Why, we must have milk," and they will buy the cheapest product they can get.

The idea is this. If we women expect to raise healthy, strong children, we must give them milk, and pure milk. If it is possible to pass this bill, it would be not only humanitarian, but it would be a credit to the country, to produce fine individuals. The children go to school. We have 200,000 undernourished children in our school in New York City. Why? Because they have been given improper food, improper nourishment. When we find that, we women raise up en masse and say, "We won't stand for it." I go to

them and they say, "Yes, Mrs. Gallagher, we will help you." They are all trying to do the best they can; trying to help me. They are absolutely opposed to this. I am appalled at it. May I see that telegram?

Senator McKinley: Certainly.

Mrs. Gallagher: Who signed it? Mrs. Eva M. Wilson. Florence E. Foster, New York City. She may be a delegate from some club. This has been signed by delegates who do not know the situation. I notice that Mrs. Elmer Blair has not signed it, and Helen Boswell has not signed it. If it was worth while they would sign it.

Senator McKinley: I understand only the ignorant ones signed it.

Mrs. Gallagher: The people who signed that are delegates. You know what a delegate is. They don't understand the situation. If they did, they would not dare do it.

I want to tell you that this must be done. I feel so strongly on this subject that they call me the milk lady, and it doesn't make a particular of difference about the milk lady. The milk lady doesn't drink so much milk herself, because I got so much when I was young. The children must have the milk to make bone and sinew, and when they come to school the teachers find out what is the trouble. Mayor Hylan, of New York, we hear a lot against him, but I will tell you one thing he did: He has given the children one glass of milk, the children that can not keep up in their studies. He has tried to do that. But we must give them a quart of milk. Every child in the country should have a quart of milk a day.

I thank you.

Mr. Holman: Mrs. Elizabeth Smith Edwards, also of New York City Federation.

Statement of Mrs. Elizabeth Smith Edwards, New York City

Mrs. Edwards: Gentlemen of the committee, I was one of the investigators for Mrs. Gallagher. I happened to be associated with Miss Cauble when she was deputy commissioner of markets of New York. I went to Albany when Mrs. Gallagher was sick and could not go, and spoke before the joint committee of the senate and assembly in Albany, and I think I am correct in saying there was not a dissent-

ing vote against this measure in the assembly at Albany, and our governor signed it when it went up to him.

I am not going to take up much of your time. I happened to investigate the schools of New York through the visiting teachers and nurses, and I found that in one school a child of 12 years of age, the oldest of six, who was a very bright child at school whom the principal thought would graduate this June, one day was back in her lessons. The principal said, "What is the matter?" She said, "Well, I can't see to study." "You can't see? Why, I will have your eyes tested." She had her eyes tested, and the oculist said that she did not need *glass*, that she was undernourished, that she needed milk. Her mother was very indignant, because she had been feeding this child Hebe milk.

I told that in Albany. That is only one case. I could cite several more cases to you.

Somebody made the remark here that it was a great deal of expense to the people that were manufacturing this substitute milk to throw out their machinery. Did the Congress or the Senate think of that when they passed the Volstead Act and which cost the brewers a lot of money? You wiped them out. We are not going to think about the expenditure of the filled-milk interests, and you needn't think about it when you pass this measure.

I want to call your attention to the fact that there was a member of the wholesalers' league there, who called the committee's attention to the fact that the great packers of the West did not make their money in pack beef; they made their money in by-products. The same thing with the Hebe milk to-day. It is a by-product of the manufacture of cream. It got its birth in Germany. It flourishes here at the expense of our little children of the poor.

This is a mother who is speaking to you, and one who nursed her own children. The great Creator gave us food for our babies, and when the mother was unable to furnish [fol. 482] it, he gave us as substitutes the cow, the goat, and in earlier days the ass. We knock at the door of death when we bring forth that child and we are going to see to it that it is properly nourished. We women of New York City are going to go through the whole country. These manufacturers send out their stories in the big magazines. Yet this is but 15 or 20 cents worth of poison. That is

what it is. I have a suggestion to make, the same as I made in Albany. If this thing is a necessity for cooking, and if Hebe is so good, why is it necessary to have a misleading advertisement on this label? Why don't they label these caps with red labels, with large black letters, "Not Milk"? And if a woman then gets her hands on this thing, she won't buy it and feed it to her infants.

We have the greatest country in the world, and we women are not going to let any millionaires, who are creating this thing, this Hebe milk, that is made by the Carnation people—we are not going to let them destroy our manhood. Why is it that some of the big evaporated milk manufacturers make a substitute for their own good commodity? To make more millions—put millions in the pockets of a few? We have our institutions for our children, supported largely by some of the people that make their millions off of this product. They would not have to build the institutions to take care of these babies when they grow into children and boys and girls if they took care of them in their youth and fed them enough of the right kind of food.

Mr. Holman: Our next witness is Mr. E. R. Quackenbush, of the Pittsburgh District Dairyman's Cooperative Sales Committee, for 10 minutes.

Statement of Mr. E. R. Quackenbush, Pittsburgh, Pa.

Mr. Quackenbush: Mr. Chairman, I represent an organization which has a membership made up of representatives of some 10,000 dairy farmers of the western part of Pennsylvania and the eastern section of Ohio, representatives of something like 100 of the prominent welfare and civic, educational and medical organizations of the District of Pittsburgh.

Our organization has, among other things, recently had a booth at one of the entertainment resorts at Pittsburgh, where a public health nurse has been engaged in measuring and weighing children of the various schools of the city as they were at this amusement resort on picnics. A very interesting report has been furnished me from week to week, of her activities. In conducting the investigation which I have been carrying on personally, it occurred to me that there was some information that might be to the point in connection with these reports, and so I compared

the reports handed in to me by this public health nurse with the district where I was making the investigation concerning the sale of this filled or oiled milk. I was very much surprised to find that in every case where a school had been awarded a prize for a high percentage of normal children there was not one case in all these where the school coincided with the district where the investigation was being carried on. In other words, among the poor primary industrial districts, residential industrial districts of Pittsburgh, a very striking fact, and one from which broad conclusions may be drawn.

I wish to present here some photographic evidence which brings out how this product, filled milk, has been advertised in the newspapers of the city of Pittsburgh.

I have extracts taken from the advertisements of the retailers in the city of Pittsburgh, photographic reproductions of sections of their advertisements. I notice in every case we have the statement where Nu-tro, Hebe, or Carolene is called "Tall can Carolene milk" "Carolene milk, can," and so on down through the list. "Tall can of Carolene milk." In every case the particular item has been surrounded by a pen and ink circle.

Those are the facts and circumstances concerning the nature of the advertising material which is furnished by the retailers in the city.

I should also like to submit certain evidence in photographic form of the display used by the retailers in the city, showing that by the retailer it is sold as milk; not as Carolene or Hebe or Nu-tro, as it is labeled on the can. It is "Carolene milk," or "Nu-tro milk," or "Hebe milk."

This is a picture of a window in one of the retail stores, in one of the congested districts of the city. This is a close-up of a certain section of the window. In the center there are cans of Carolene between two brands of whole milk. That is the usual way of displaying the filled product—in the center of another brand which is the whole product.

Here is another window display in which there is nothing on the sign to indicate that it is anything other than whole milk.

This window display is merely a label across the window several feet long—"Special Carolene milk." The word "milk" is in large letters. "Five cents a tall can."

Here is was necessary, in order to get a picture of the window, to include in the picture several of the purchasers of the milk. These are the children that drink Hebe milk.

Here is one more picture, gentlemen. This is rather indistinct. It was taken under hurried conditions and in rainy weather. I would like to tell you the story of this one. This window contains a pile of Carolene milk beside a pile of Pet milk, a whole milk. In one corner, in front of the Carolene brand pile of milk, they place a milk bottle which is, as everyone knows, a symbol of whole milk. In that bottle was not milk. There was, up to the cream line, flour and sugar. Above the cream line, there was flour and corn meal, forming the cream line of the bottle. There was a cap of one of the retail dealers of whole milk of the city and the bottle was the bottle of another dealer in whole milk. Everybody knows the price of that bottle of milk—supposing it had contained milk—in the city of Pittsburgh. The idea, of course, was a comparison of the two in price.

We find in the city of Pittsburgh that the filled milk is sold slightly cheaper; that is, some brands. On certain days during the week in certain sections we find they put on special drives at lower prices, and have increased their sales in that manner. We found, however, that in the district where the industrial population resides are the districts where the big sales take place.

I have investigated personally a great number of stores in the four representative industrial residential sections of the city, and I will submit this for the record.

I would just like to call your attention to a fact concerning the question as to whether this milk is sold for use for infants; that is, the actual sales methods employed by these retailers, some of the answers that I have received personally to questions which I put to them concerning the comparative quality of this product, as compared with whole milk, and recommendations for use for babies. I will just read a few of these. Here is one reply:

"I guess it says on the can not to use it for babies, so it's their hard luck if they do—wouldn't kill a youngster anyway."

"Not a real milk; only a compound. I wouldn't use it; but the working people who can't afford anything else, do."

"Not much difference."

"Big sales. Twenty-five cases per week. American trade uses Carnation because they know what it is."

"Carolene is cheaper and the foreign trade don't know the difference."

"Question. Did you ever hear that it was not good for youngsters to use?

"Answer. No; I never heard of it."

Showing that in occasional instances retailers do not know the true status of the product. That, however, is rather unusual.

"Says on the can not to use for infants, but, of course, lots of people do."

"Used for all purposes, but it says on the can not for babies."

Those are just a few of the answers that I have received to questions concerning the quality of the product.

There is just one thing, gentlemen, that I wish to point out and that is this, that in our industrial population of Pittsburgh we have over 50 per cent of our people who are foreigners. Many of that 50 per cent can not read English at all. Many more of them would not trouble to read English if they could, such as is contained on these labels, and these brands are being bought by these people because they are slightly cheaper. I hear continuously from workers out in the field of these people who, even when told of the difference in the quality of the product, reply that it is slightly cheaper, "And we can't see the difference." They can't immediately, of course.

I think that is all I have to say, gentlemen. I thank you.

Mr. Holman: Our next witness in order is Dr. E. V. McCollum, of Johns Hopkins University.

[fol. 483] Statement of Dr. E. V. McCollum, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md.

Doctor McCollum: I am a resident of Baltimore and am in charge of the chemistry department, professor of chemical hygiene in the School of Hygiene and Public Health, Johns Hopkins University.

My interest in this question dates back a number of years. I may say that for the last 15 years I have been engaged solely, or practically solely, in investigating prob-

lems relating to nutrition. During this period of 5 years we—and by this term I mean not only my own laboratory but a number of others as well, notably Yale University, the University of Wisconsin, Columbia University, and the University of Minnesota—have been able to make great advances in our knowledge of what constitutes a satisfactory diet, and we also have gained a new insight into the importance of the character of the food supply to physical well-being.

Now, a dozen years ago we believed—and I mean again by we the food chemists, physiologists, and medical people—that if a diet contained suitable amounts of protein, suitable amounts of energy which we measured in terms of calories, if it contained certain mineral elements, and if it was digestible and acceptable to the human palate it would be a satisfactory food supply. We now know that this is not the case. We have during the past dozen years made the discovery that there exists at least three, and I have lately felt so confident that I have announced from our laboratory the discovery of a fourth, nutritive principle, which we collectively speak of as vitamins. These have been discovered by several people. Two of the four of them came from my own laboratory. Now, among the things which we have learned which are of greatest significance from the standpoint of nutrition is that it is of much greater importance that the diet be constituted properly with respect to every factor than we formerly believed, in order that satisfactory nutrition may be attained.

Now, actually, we have known about this as it applies to agriculture for many years.

A farmer or an animal husbandryman who wants to produce a No. 1 colt, does not let that colt feed around the straw stack or eat whatever happens to be available at the time when it is growing. He is very careful to inquire of experiment stations exactly what foods and what proportions to feed this colt in order that he may avail himself of the best prospects of development in that animal.

It is just this idea that we have come to appreciate in human nutrition. We know now to a degree which hitherto we did not know, that is, a few years ago, what constitutes a satisfactory diet. Having discovered those things, and having applied during the last few years, in a number of laboratories, methods of study which involved animal ex-

perimentation, we have brought to light the specific dietary properties, the shortcomings, and elements of strength in all our important foods, and we are in a position to evalue diets in a way which hitherto we could not do.

We also have now available a great deal of exact information concerning the effect of deviating in slight degrees from optimum nutrition, a condition which, until we knew what an optimum diet was, we could not study. Now, we have that information. Being in possession of that information, we are in position, and were some years ago, to inquire into human experience, to see what human beings in different parts of the world were taking as foods, and to observe their physical development, their health standards, and in some degree, so far as necessary, have correlated human experience with diets. When we do that in this country we are impressed with the fact that a great many of our children at the present time are not what they ought to be physically. They are undernourished; they are flat-chested; their shoulder blades are too prominent. We have more or less evidence, even after they are well along in school age, of their having had, in vast numbers, rickets in childhood—faulty skeleton development which we now recognize as being entirely too common. We have in this country a surprisingly large number of children who have had rickets.

Doctor Hess, of New York City, made the statement last summer, in an article in the August number of the Journal of Biological Chemistry, that about 50 per cent of the children in this country to-day have faulty bone development.

Another evidence that we are in poor physical condition, for some reason or another, is the bad condition of our teeth. I believe I do not exaggerate when I say I have talked to and shaken hands with probably half of the 38,000 dentists in the United States. It sounds like a big statement, but I have had that opportunity, at either State or national dental associations. All dentists are agreed that the teeth of the people of this country are worse now than they have ever been; that a hundred years ago the teeth of the people of this country were immeasurably better than they are to-day; that small jaws are entirely too prevalent among children of school age; that teeth of a poorer quality, which tend to decay early are increasingly prevalent.

The United States Public Health Service examined about 16,000 children in West Virginia more than three years ago, and about the same number were examined in Missouri more recently. All that sort of data and other data that could be obtained tend to show that approximately 90 per cent of the children of public school age have from 1 to 11 unfilled cavities in their teeth.

Senator McKinley: You are going to bring this around to this matter, are you?

Doctor McCollum: I am bringing it around in about three minutes to the point at issue.

It behooves us to inquire why all this is true.

The basis of what I have to say to you is this, that in the course of investigations in my own laboratory through not less than 5,000 carefully planned, carefully observed feeding experiments with animals, I have been convinced that a type of diet which consists of milled cereal flour, such as our common wheat flour, and our common corn meal and polished rice, oatmeal and rolled oats, and all those things, and such meats as the costly cuts of meat of which we are so fond and eat so regularly, these, together with potatoes and other tubers and fleshy roots, such as sweet potatoes, radishes, beets, turnips and the like, and supplemented with sugar, does not make a satisfactory diet for any experimental animal we have worked with. As a food mixture it is a failure in animal nutrition. So we are in position, then, to inquire whether such a diet is a failure in human nutrition, and the evidence that it is, is of no doubtful nature. One is the increasing prevalance of underdevelopment, undersize in school children, faulty skeleton development, faulty tooth development, because a tooth will persist and remain sound only if it has within itself the essential barriers of defense against bacteria invasion.

It is those things, coupled with the fact that when the school children in nearly every city and hamlet in this country are examined, as has been done in the last few years, we find 20, 30, even in some cases 40 per cent of the children in public schools are 10 per cent under normal weight for their ages. These children in very numerous cases, as the records of health organizations of New York City, such as the Elizabeth McCormick Memorial, in Chicago, and local and less pretentious organizations have

shown, respond with a rapid growth, improvement in their school work, and every evidence of improved health when they are induced to take a liberal amount of milk in their diet. This wheat flour, meat, potato, and sugar type of diet which we are taking so regularly, and which constitutes by far the greatest portion of our food, is an unsatisfactory diet.

Senator McKinley: Ought we not pass a bill, then, to stop it?

Doctor McCollum: No. We must educate the public to add to that diet certain things which will supplement its efficiency. That is what we are trying to do now. The thing which I am trying to put across in this country is in fewest words this, that we should borrow the best features of the oriental type of diet, namely, the eating of vegetables which come from the leafy parts of the plants, such as the cabbage, parsley, turnip tops, beet tops, lettuce, and the like. We should eat these more freely than we have before, because their dietetic properties are unique. Secondly we should take a certain amount of raw food every day. Third, we should increase our consumption of milk of dairy products to about double what it is now. We drink something under a pint and we should take about double that amount. If we can do those things we will have established a reform in this country which will, within three generations, show very marked improvement in the physical wellbeing of the children.

Now, we come to the application of what I have said to the problem of filled milk.

One of the reasons why milk is a food and why we should encourage its uses to a greater extent than we have hitherto, is the fact that milk has unique dietary [fol. 484] properties. It contains a substance which is not possessed by any vegetable fat that has been studied and I can assure you that all of the more important vegetable fats which enter into human diet have been studied. We can not find this property in vegetable fats.

Senator McKinley: Perhaps this is digressing, but I have always wanted to have an opportunity to ask an expert chemist an expression of opinion on this. You remember during the war Mr. Hoover said if we would use such cheese as that known as clabber, we would get about the same food value as from meat. Is not that made of skimmed milk?

Doctor McCollum: The cottage cheese, curd, as it is called, is made of skimmed milk. What Mr. Hoover said is essentially correct, that it is about the equivalent of meat. But you will recall that I just asserted and am prepared to stake my reputation on it, that a diet of milled cereal products and meat, such as ham, steak, roast, and the like, that we are so fond of, potatoes and sugar, is not a satisfactory diet. It does not maintain vigorous optimum development.

Senator McKinley: Is cottage cheese a good diet?

Doctor McCollum: That is a wholesome component of the diet; but the keynote to successful nutrition is the proper combination of food so that there will be no deficiency anywhere. Many of our more common foods are individually faulty and have shortcomings. So that what we are trying to do now is just what agriculture has already established in great measure in animal feeding—learn exactly what combinations of foods and in about what proportions to take them, so that we will get the results that a successful feeder of animals gets.

Now, to proceed, then, with the filled-milk question. Filled milk is essentially skimmed milk and a vegetable oil. It has the properties which we would assume that it should have under those circumstances. It is almost lacking in this vital principle of which butter fat contains such liberal amounts.

Filled milks would contain a very small amount of this nutritive principle, since they are made from skim milk. Milk is a unique food because it is a supplemental food with peculiar properties, which we need in a large way to make good the shortcomings of our meat and potato and sugar type of diet. I am not preaching milk only. You will appreciate that I am talking about the best features of the diet of people other than Americans, which we might properly borrow, and this is one of them. There is a very widespread effort and a very profitable line of endeavor being promoted in this country to educate the people, the housewives, to purchase and use, as far as they can get filled milks, and use them in the home in cookery. A few years ago the manufacturers of filled milks were not quite so careful about their statements as they are to-day. One who is familiar with the advertising matter of five years ago used in connection with filled milk, and who would

look at what we see to-day, would imagine, or must come to the conclusion, that they had made, under the pressure that has come through legislation against them, temporary reforms. The effort is still here to put this product, an inferior product from the peculiar standpoint of a supplemental food, into the homes in place of milk.

Now, that is the argument that I want to place before you. Last year I was asked to appear before the Committee on Agriculture of the House of Representatives. I gave them information——

Senator McKinley: Then is your testimony before the House?

Doctor McCollum: My testimony is before the House. May I add one thing?

Senator McKinley: Yes; go right ahead.

Doctor McCollum: I was asked at that time to tell about an experimental inquiry regarding coconut oil, regarding skimmed milk, and what are their properties. I showed them at that time experimental results, feeding experiments, in other words, with skimmed milk, with coconut oil, and with several types of diets which were discussed in my report, and which I need not here repeat. I was asked by that committee at that time why I did not have data relating to Hebe, for example, or Silver Key, etc. My explanation is this: It is the same as I gave them, namely, that in all my experimental work I had consistently refrained from doing experimental work with any manfactured product; that I had limited myself for 14 years to the study of natural products, or to those natural products as I treated them myself in the laboratory. You will readily see why I should do that. I have not commercialized myself in any way, and I could have made a great deal of money by taking commercial products and giving testimonials as to their value, etc.; but I have not done so. It is for that reason that I had not studied filled milks.

I may add that I have deviated from my long-established practice in one case. During last winter, at the request of the American Medical Association, Doctor Simmons, editor of the Journal of the American Medical Association, asked me to investigate certain of these vitamine preparations for him or for the association, in order to know whether to accept their advertising, and what ac-

tion to take in connection with it. And so I have been investigating these products. I promised, however, at the request of the House committee, that I would conduct experiments with Hebe. They wanted me to do so. If you would like to see the results of those studies I will show them to you in a very few moments.

Senator Ladd: I think that would be very important.

Doctor McCollum: I brought along a number of pictures. I may illustrate by this photograph what a well-nourished experimental domestic rat looks like. Most of my work is done with rats, although I use other animals, such as guinea pigs and rabbits, to some extent.

This is a beautiful and perfectly nourished individual, about one-sixth through the extreme span of life. I would like to show you, if I may take the time, the effects of restriction on the rat itself. The rat is an omniverous animal, comparable in its dietary needs in most respects to human beings.

I would like to show you these two pictures. I may say that these two animals were of the same age, same sex, and almost the same parentage; that is, they are closely inbred strains. They were on their experimental diet the same length of time. This one at the top you can see is undersized, rough, and old looking, and I can assure you he was nervous, irritable, and crabbed. He was fed on the following diet: He had 5 per cent each of turnips and beets, 30 per cent of potatoes, 10 per cent each of navy beans and peas, 10 per cent of round steak (beef steak), 20 per cent of bolted wheat flour, and 10 per cent of corn meal. There is a vegetable and animal mixture containing two fleshy roots (turnips and beets), one tuber (the potato), two legumes (peas and beans), one animal-flesh food (round steak), and two milled cereal products (corn meal and wheat flour). You see that this animal has failed to develop as he should. This one had exactly the same food mixture for the same length of time, with this exception, that we reduced the potatoes from 30 to 24 per cent and the peas and beans each from 10 to 8 per cent in order that we might add 10 per cent of whole-milk powder in his diet. That contains a certain amount of butter fat and the other elements of milk. The difference between those two animals of the same age and the same number

of days on the diet is so marked that that requires no further discussion.

I conducted, then, at the request of the House committee, comparable experiments with a standard brand of evaporated milk and Hebe. Before I show you the results of those, however, I must explain to you that the vitamin which is so abundant in butter fat and which is lacking in vegetable oils induces certain effects in nutrition. Here, for example, is a pair of animals whose diets are exactly alike except in the character of the fat which they obtained. This was not a total deprivation experiment, but the diet did not contain the necessary amount of butter fat. This one had 1½ per cent of butter fat. This one had 5 per cent cottonseed oil. The same age, the same sex, the same diet, excepting the nature of the fat. The character of results you can readily see. Specifically, when you restrict animals to a diet which is lacking in this vitamin and make a complete deprivation, you develop a peculiar type of ophthalmia, oedema, inflammation of the eyes, just as you see there. Here you see a healthy rat. You see how bright his eyes are. Here is an incipient case, the eyes swollen, ulcers on the cornea, yellow spots, due to the lack of red corpuscles, and the eye filling up with white corpuscles. This, I may say, is so important as a human disease in certain parts of the Orient where they go us one better in the simplicity of diet, that the South Manchurian Railway, which is esssentially, I understand, the agent of the Chinese Government, maintaining 18 hospitals, sent over last fall its chief ophthalmogist to stay in my laboratory a year in order to study this disease, and I may say he has made a very valuable study of that condition.

Now, to come specifically to the experimental study of Hebe and standard condensed or evaporated milks.

Just let me point out for a moment that we have here four pairs of curves; two curves in this pair, two in this, two in this, and two in this. Four pairs of growth curves. The steeper the curve the more rapidly the animal grew.

I may say that this basal diet is exactly alike. Here is butter fat, cottonseed oil, olive oil, coconut oil. These two animals had butter fat. These two had cottonseed oil. These two had olive oil. These two had coconut oil. They can not grow well on that kind of diet.

[fol. 485] Let me show you first these two pictures. Here is an animal, this being a close-up, a larger view of the head of this animal, in my right hand. This animal had a diet consisting of 60 per cent of rolled oats supplemented with certain salts and dextrines, starch. It had, however, 22½ per cent of the total matter of this diet in the form of Hebe. You will notice, I think, here, that the eye of that animal does not look right. I will show you how the eye of a normal rat photographs. See how clear it is. This is a close-up, an enlarged view of that eye. In other words, he is developing a severe case of ophthalmia; swollen eyelids, inflamed eye, infected eye which, in the course of a few days, would result in blindness. That illustrates what 22½ per cent of filled milk will do.

I have here two animals which were fed on this same diet of rolled oats, properly supplemented with inorganic elements, and in this case we put in 22½ per cent of Hebe, a filled milk with coconut oil in place of butter fat. You will notice that this rat is very emaciated and thin, that his eyes are swollen shut, and I will tell you we photographed him only the day before he died, because his death was imminent.

This one had been on the same diet, except that we substituted the 22½ per cent of Hebe by a 22½ per cent of Carnation milk made by the same company that manufactures Hebe. The animals were fed the same amount, but Carnation milk had the butter fat in it whereas Hebe did not have it.

I will just show you one other picture which illustrates the importance of a proper diet for the nursing mother. Here are two little rats of the same age, born the same morning, but this one's mother had a satisfactory diet with respect to the components which we know a diet ought to contain. She was able to induce normal growth by means of her milk.

The mother of this one had a diet which was faulty in just such respects as we are talking about here, and you see what a skinny, stunted, runty little creature it is.

Gentlemen, what I have to urge, then, is that the peculiar value of milk in our diet is essentially as a supplemental food; that the qualities which are possessed by it as food are of especial value. What I want to point out, then, is that we have need of certain supplemental foods, green leaves, fresh milk, in our diet, if we are to improve the physical

well-being of our citizens and prospective citizens. Milk occupies a unique place. I think it is a dangerous thing to put into the homes on a large scale a product which perhaps may sell for a cent less a can in certain stores and the same price in other stores, to introduce into cookery, ice creams, creamed vegetables, and soups, and one thing and another, which we are telling the women how to make in order to introduce milk in cookery. I think it is a mistake and is a mistake of more gravity than we imagine, if we look at optimum nutrition rather than normal nutrition. The word "normal" has been abused. Optimum is something we look at sharply and clearly when we look at the best specimens in our community. If we are to work such a conclusion, we want to keep such thing off the market.

Senator Ladd: Doctor, you said there were four vitamins. Will you state just briefly the names of them and where they occur?

Doctor McCollum: Yes. We have designated the first three by the alphabetical symbol vitamin A, vitamin B, vitamin C. The fourth will probably be called vitamin D. There are other variations of these, but for the present purposes that is sufficient.

Vitamin A was not the first one to be discovered. Vitamin B was the first one to be clearly pointed out by Dr. C. Funk in 1911. But vitamin A, because it comes first in the alphabet, I will say is fairly abundant and associated with certain foods. It is exceptionally abundant in the liver fats, like codliver oil and other liver oils, in butter fat, in the fat of the egg yolk, and is also found in the leafy vegetables, as spinach, lettuce, and this is one of the reasons why they have unique dietary properties. Curiously enough, the tubers and fleshy roots, with few exceptions, have been found to be very poor in this particular vitamin. This is, of course, the one associated with fats. I may add that this vitamin A is associated with the development of a peculiar eye disease, which we now recognize as xerophthalmia.

Vitamin B is the next one. This one is associated with a disease of the Orient known as beriberi, which was long believed to be a tropical disease, but we now know that it occurs elsewhere. In 1914 in the jail in Elizabeth, N. J., they had restricted, unfortunately, through ignorance, for a time their prisoners to a diet which was composed largely of meats and potatoes. They had developed this disease. It is a general paralysis. I may say that in Newfoundland,

where for eight months of the winter they have restricted themselves absolutely to wheat flour, salt pork, salt codfish, and molasses as practically their sole food supply, they go us about two better in the matter of drawing their food supply from these foods that I have discussed. They have what is known as celiac disease. The vitamin B is abundant, relatively speaking, in many of our food supplies, such as peas, beans, in the glandular organs, such as the liver and kidneys, and all the leafy vegetables, potatoes, and the like. Cooked or uncooked vegetables are good sources of supply for vitamin B, but not for vitamin C.

Vitamin C is related to scurvy. It is found in fresh foods and fresh vegetables without exception, but it is, unfortunately, a very unstable substance, so that cooked foods, preserved foods, dried foods, will contain but traces of this substance. Persons who would avoid coming somewhere near, even, actually developing the disease, should see to it that every day in their diet they have a certain amount of raw vegetable, or of raw fruit of some kind, an orange, apple, grapes, a little celery, cabbage, or something of that sort. For that reason one of the things I am trying to do is to get the people of this country to eat more salads, so that they will eat more fresh fruits and vegetables.

The new vitamin, that one which is associated with bone growth, is associated with surprisingly few of our natural foods. It is most abundant in cod liver oil, and it is found in the liver oil of the shark, and also the burbot fish of Lake Michigan, also in leaves. If a calf, or colt, fed on milk in its early days, has access to green grass, or good forage plants, so within two or three weeks it can just nibble leaves, it never develops rickets; but deprive it of such supplemental leaf supply and it may develop rickets on a diet of skimmed milk.

Many farmers still do not know they can not keep a pig in a dry lot and feed him corn and bran and make a good pig out of him. One has to feed him those things, grain and the like, but must supplement his grain ration with good green pasture and skimmed milk. This new vitamin is considered, as we have shown by three years investigating, before we felt certain enough of this impression to announce the discovery of a new principle, especially with metabolism of the growing bone. Through elaborate investigation, which it would be out of place to enter into

here, we have demonstrated a new principle with which none of the other vitamins has anything to do. This new substance is not abundant in our foods, and that is why about 50 per cent of children have or have had rickets. Many of our babies are not handled in a very intelligent manner. Let us not do it any worse. Let us try to do it better.

Senator McKinley: We will take a recess until 2 o'clock.

(At 12:45 o'clock p. m. a recess was taken until 2 o'clock p. m.)

After Recess

The committee reconvened at 2 o'clock p. m.

Senator McKinley: You may proceed, Mr. Holman.

Mr. Holman: The next witness, gentlemen, is Dr. J. C. Gittings, professor of pediatrics in the Graduate School of Medicine of the University of Pennsylvania, Philadelphia.

Statement of Dr. J. C. Gittings, Professor of Pediatrics, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pa.

Doctor Gittings: Mr. Chairman and gentlemen, as I see this question, it depends upon two premises and involves three points for discussion.

The first premise, of course, is that the butter fat has been removed from the milk and coconut oil substituted.

The second premise is that all of these preparations are manufactured in the same way and what applies to one applies to all.

The points for discussion are three, one of which we need not concern ourselves with, because there is no debate about it. It is not a poisonous food; that is to say, it is a wholesome food, this filled milk.

Senator McKinley: You say it is wholesome food?

Doctor Gittings: I say it is not a poisonous food.

Senator McKinley: Will you explain that statement a little more fully?

Doctor Gittings: It is a wholesome food in the sense that it is not poisonous. Its sins are sins of omission rather than sins of commission.

[fol. 486] Senator McKinley: I see your point.

Doctor Gittings: It is the removal of a principle which is the most important in the stimulation of growth and the substitution for it of a principle which is insufficient to stimulate growth.

The second point for discussion is this: Is coconut oil as good a food as butter fat?

The third point is, if it is not as good a food, will the laity, in ignorance, purchase this inferior food in spite of the labeling in whatever way you choose to print it?

I am especially concerned, of course, with this second point, as to whether or not the coconut oil is as good a food for babies and children as the butter fat.

It seems to me that, in view of Doctor McCollum's testimony, there is hardly anything left to be said about the fact that it is not a suitable food as a substitute for those containing butter fat for anyone, child or adult. These experiments that have been spoken of, of course, can not be done on human beings, but it is perfectly proper to apply the results to human beings. For instance, these diseases beri-beri, scurvy, and undernutrition are produced in animals by depriving them of these food principles or vitamins. Those diseases occur in human beings for the same reason. Human beings can be cured promptly and immediately by feeding a proper amount of vitamins, just the same as can the animals. So that after what he has said about the effect and after what he has demonstrated about the effects of feeding animals on filled milk, as compared with the effect of feeding them on milk containing butter fat, it seems to me there is very little else for me to say.

I have been practicing pediatrics for 25 years, and if there is any one thing in the realm of feeding or of nutrition that has impressed itself upon my mind in that time, it is that the child who, for any reason, is deprived of butter fat, labors under a tremendous handicap, and sooner or later, to a greater or less degree, almost invariably will be undernourished and often subnormal in growth. That is a fact which I think is incontrovertible.

Attempts to substitute for butter fat various other kinds of fat have been made from the time it first became necessary to feed so many children artificially. The natural food, of course, is mother's milk, which contains 4 per cent butter fat, and cow's milk is the only practicable substitute. If you voluntarily deprive the child of cow's milk fat and

substitute another form of fat, you can expect undernutrition, and undernutrition is almost surely followed by the disease known as rickets.

The result of the deprivation of infants of this fat principal, of course, is not quite so dramatic as it is in the case of animals. Infants can be fed on skimmed milk, for example, with other things, like cereals, for a time. They do not die like the rats die, but they do develop, as I say, with great success, various forms of undernutrition and rickets. The mortality of the undernourished or rhacitic child, or of both, is increased. It must be remembered that when the child is undernourished it becomes a comparatively easy prey to a host of infections which are constantly taking their toll of infant life. His resistance to these infections is unmistakably lowered, and the mortality which goes down under the heading of pneumonia, for example, or of gastro-intestinal disease very often really belongs to this state of undernutrition, because the child is unable to resist the infection in the first place, or to throw it off in the second place.

In regard to the third point that the laity is liable to buy this milk under a mistaken impression that it is just as good as evaporated milk, probably very little need be said, except that I want to state this fact, that I have known these mothers, I have worked with them for years, and I know their mental processes, or lack of them, and I am perfectly confident that the majority of those who speak and read English would be perfectly willing to accept filled milk as a substitute for evaporated milk, and I am equally confident, of course, that practically all of the foreign-speaking people could be imposed upon.

There is one little additional point that is of some practical importance, and that is that it is the child of the family who usually is sent to buy the foods from the grocery store, and it is perfectly easy to see that a child can be imposed upon with extreme ease.

I therefore want to make a plea for the infant and the child to whom nutrition is of such vital importance. There is no good substitute for butter fat in the ordinary fats of the market: that is to say, the vegetable oils or other forms of animal oils, and if evaporated milk is placed on the market, deprived of its butter fat, and bolstered up with a vegetable oil, I am confident that it is an inferior food product for infants and for children. I stress it particu-

larly for infancy, because during the first eight months of life infants, of course, depend upon milk alone. Later in life it is still a factor, but its particular effect is on the infant.

The only possible exception in the class of fats, other than butter fat, is cod-liver oil. Of course, obviously, this can not be considered as a substitute for food fat, in a commercial sense. Unless cod-liver oil is added to other fats I know of no combination of fats which would equal in value butter fat.

Senator McKinley: Just as a matter of curiosity, I would like to know whether cod-liver oil could be substituted?

Doctor Gittings: Cod-liver oil can be substituted in minimum amounts mixed with other fats, but the cost of the product would be prohibitive.

Senator McKinley: I see.

Doctor Gittings: I said "in a commercial sense."

Senator McKinley: Yes.

Doctor Gittings: Of course, that can not be compared for a moment with the product that we are discussing.

I think that is all I have to say, gentlemen.

Senator Kendrick: Doctor, before you take your seat, have you given any study to the question of supply, as to whether or not the employment of these compounds—do you call them compounds or adulterated preparations?

Doctor Gittings: I alluded to them only as filled milk.

Senator Kendrick: Filled milk.

Doctor Gittings: Yes.

Senator Kendrick: When I first heard the term "filled milk" as used in the bill, I thought it was "spilled milk," but I want to get your idea, as to whether you thought, by reason of the failure to allow the manufacture and sale of this product, there would be an actual shortage of the genuine milk product?

Doctor Gittings: That, of course, is not within my realm. I do not know the statistics of the dairy industry. I know that before the war, which would be a comparable period, there was no scarcity. I never heard of a mother not being able to buy a can of condensed or evaporated milk.

Senator Kendrick: Has this product been introduced on the market since the beginning of the war?

Doctor Gittings: I think so. As I understand it it has been.

Senator Ladd: All except, as I understand, Hebe, which was on the market to a certain extent before the war.

Doctor Gittings: Before we went into the war?

Senator Ladd: Yes, before the war, in a limited way, but it had not made great progress.

Mr. Holman: Senator, the witness who will follow Doctor Gittings will attempt to answer specifically the question that you have just asked.

Senator Kendrick: Very well.

Senator McKinley: We are very much obliged to you, Doctor.

Mr. Holman: The next witness is R. W. Balderston, secretary of the Interstate Milk Producers' Association, of Philadelphia, Pa., and representing also the National Dairy Council.

Statement of Mr. R. W. Balderston, Secretary of the Interstate Milk Producers' Association, of Philadelphia, Pa., and Representing the National Dairy Council.

Mr. Balderston: Mr. Chairman and members of the committee, in response to the question which Senator Kendrick asked, I want to go into that matter before I give you some evidence as to the trade practices and selling practices of the interests which market filled milk. I appeared before the House committee, Mr. Chairman, and I will endeavor this afternoon to say nothing which was introduced in evidence at that time, unless you care to have it, but will simply submit new evidence.

It was my privilege to be associated with Mr. Hoover's child-feeding operations in Europe, immediately after the war, and in our investigations in regard to the condition of the children whom we were there to feed, we invariably found that the most striking feature was the connection between demoralized milk supply and the undernourishment. In many of the cities of central Europe the milk sup- [fol. 487] ply was about one-tenth of the normal supply, pre-war. Not only that, but the farmers, because of the price of butter were partially skimming the milk at home, and the dealers were skimming it again; so we found, by actual test, that there was about 1½ per cent of butter fat in the milk sold in those cities, instead of 3½ per cent, as is the case in the normal production of the cows.

Senator McKinley: That reminds me of the cowboys on my ranch who, on one occasion, protested against skimming the milk, and they said they did not mind skimming it on one side, if they did not skim it on both.

Mr. Balderston: There was skimming it on both in Europe. We found the milk dealers running a separator in a back room, which they thought was out of the way of the inspectors, and nobody but an experienced dairyman could have found it. The parallel conditions in milk supply and undernourishment has shown the people of Europe the intimate connection between the dairy industry and the normal economic life of the people and the nutritional life of the child.

In this country we have plenty of cows. Up to the present time we have continued to have an entirely adequate milk supply.

Senator McKinley: May I interrupt you right there, Mr. Balderston?

Mr. Balderston: Yes, sir.

Senator McKinley: I was looking at the figures day before yesterday, and I think it would be interesting to know whether the figures indicate that there is an increasing number of dairy cows per capita in this country right along now?

Mr. Balderston: Yes; they do. And also an increase in the production per cow.

Senator McKinley: Yes.

Mr. Balderston: That was the point that I was coming to next. It was the low production per cow in those Central European countries that was responsible for the low supply of milk. As you no doubt know, Germany had almost as many cows at the end of the war as she had at the beginning, but the farmers had not the proper food for the cows.

The development of the dairy industry in this country has been such that for years the farmers have been producing more and more milk per cow. As you will remember, we formerly had our dual-purpose Shorthorns, but now we are developing dairy cows with the most wonderful records that there are in the world. So that the number of dairy cows in this country, great as it is, is not the whole story. Our farmers, through better feeding methods and better breeding methods, are going to be able to produce all the dairy products which this country will need in the

future, provided the country appreciates this intimate connection between the dairy industry and the nutritional life of our people, especially of our children, and continues to use regularly that adequate supply of dairy products which every family should have. If we shift over, as our friends who manufacture these compounds would have us do, to compounds which do not contain whole milk, you will, by that much, discourage the dairy industry; the cows will go to slaughter, and the farmers will shift to other lines of agricultural endeavor, and it will take a long time to get them back into the dairy business again.

I have not the figures right here; but as I remember them, the fluid-milk supply of our cities takes about from 45 to 50 per cent of the total supply of the country. About 43 per cent goes into cheese and butter, 3 or 4 per cent into ice cream, and perhaps 6 per cent condensed milk.

The interests which manufacture these "filled-milk" compounds are a parasite on the dairy industry. By this I mean that they buy the whole milk, just the same as the firms which are manufacturing condensed milk and evaporated milk, and let me also say that these firms who manufacture these compounds are also all of them manufacturing whole-milk products, such as evaporated milk, and they are manufacturing either evaporated milk or filled milk in the same factory, according to the market demands. They are all equipped to manufacture the whole-milk product. If at any time it seems better to skim the cream off and then to introduce the coconut fat, they immediately turn their practice in the factory over. Most of them have a selling organization under a different name, but the manufacturing is done by the parent company, which is the company manufacturing and selling the unadulterated product. That is so in the case of the Carnation Milk Co. The Hebe Co. is simply a sales organization for the sale of the product manufactured by the Carnation Milk Co.

These facts were brought out at the hearing in Wisconsin. I am giving you quotations from evidence in that hearing.

Senator McKinley: It is quite possible that these figures have already been given, but I will not ask to have them given again, but I was wondering if you have the price of the products that you are now referring to as compared to the price of the wholesome products.

Mr. Balderston: Mr. Holman this morning gave you the increases in the business of manufacturing these compounds this year over last year showing that it was about twice this year over what it was last year. I have a paper here which shows how this business has grown since its inception.

Filled milk production; pure or full skim modified with foreign fats

Year	Canned	Bulk	Total
1916	12,000	14,134,712	14,146,712
1917	18,504	17,489,064	17,505,568
1918	41,033,855	7,591,182	48,625,037
1919	62,262,221	2,748,120	65,010,341
1920	84,044,000	2,517,000	86,561,000
1921	59,020,000	5,873,000	64,893,000

In 1916 there were about 14,000,000 pounds manufactured, chiefly bulk goods, and only about 12,000 pounds of canned goods. In 1917, total production had grown to 17,000,000. In 1918, which is the period Miss Cauble referred to this morning, it had grown to 48,000,000. In 1919, it had grown to 65,000,000, and in 1920 to 86,000,000 pounds. In 1921, it had dropped back to 59,000,000.

Senator McKinley: To what product are you referring now?

Mr. Balderston: This is filled milk.

Senator McKinley: Filled milk?

Mr. Balderston: These compounds, the products which we are speaking of.

Senator McKinley: Eighty-six million pounds?

Mr. Balderston: Eighty-six million pounds. Of that, however, 84,000,000 were in small cans such as these [indicating], and only 2,000,000 in bulk, the bulk goods being sold in big barrels or big cans, and used by the trade or manufacturing interests, or in the restaurant trade, which interests buy it in bulk, wholesale.

In 1921, the canned goods had dropped from 84,000,000 back to 59,000,000, due to economic causes and for various reasons that we need not enter into here. The bulk goods, however, had increased over 1920, and had gone up to 5,000,000, as against 2,500,000 in 1920, showing that where it is impossible to sell it with the label it is sold without the label in restaurants, and in ice cream, and in various other ways in which the material has found a ready and an increasing sale.

Of course, we do not have the figures covering 1922, except for the first three months, which Mr. Holman gave you this morning.

Senator Kendrick: I would be glad to have you compare the prices of those products.

Mr. Balderston. I will be glad to do that.

Senator Kendrick: With the pure milk product.

Mr. Balderston: The sales price or the buying price?

Senator Kendrick: I would like to have you compare the prices of these manufactured products with the prices of the pure milk product.

Mr. Balderston: I have here before me, and will pass around to the committee, a photograph of a collection of cans bought by our investigator, showing, on the one hand, a stack of cans of milk, consisting of a number of brands in common use, and, on the other hand, a stack of cans of compounds, and the prices.

You will notice that the range of prices on the whole milk product was from 12 cents to 9 cents per can of this size. At the same time you will notice that the prices of the compounds ranged from 12 cents to 9 cents, according to the attitude of the grocer toward his trade and the kind of products he handled. We found Hebe, the product which is most commonly known, sold all the way from 9 to 12 cents in our Philadelphia market at that time. It is also true that in many cases stores make special Saturday drives with these compounds, selling them below the price at which they are ordinarily sold.

[fol. 488] In our surveys in the mining regions of Pennsylvania it was found that in the small mining towns the storekeeper sold these compounds just as high as his neighbor in the next town sold the legitimate milk product, the evaporated milk.

Senator Kendrick: What is the label on that?

Mr. Balderston: I will pass this around.

Senator McKinley: Here is the label. [Indicating.]

Senator Kendrick: Yes. I did not notice it, but do they advertise it as milk?

Mr. Balderston: The label is "Strictly in accordance with the regulations of the United States Government, under our pure food act," but their advertising methods are entirely different, because they are not covered by the present law.

The manufacturing costs of this material are shown to be about as follows: They remove 40-cent butter fat and sub-

stitute therefor 12-cent coconut oil, and their own cost figures, submitted in Wisconsin, showed that this saving amounts to about 3 cents per can.

Senator Ladd: That is the saving?

Mr. Balderston: Yes. Miss Cauble brought out to you this morning that their big argument that they advance to the storekeeper is his increased profit which he gets. Now, I want to show you something about labeling methods. The most common brand that we hear of is "Hebe," but there are six other brands, samples of all of which we have with us. There is a company which manufactures "Golden Key" evaporated milk.

Senator Kendrick: I see that brand here, too.

Mr. Balderston: The same company manufactures a filled milk compound, which they call "Silver Key Compound." They take the same shaped key and use it on both labels.

Senator McKinley: I wish you would read into the record what is shown on that can.

Mr. Balderston: The "Silver Key" is shown, and "A compound of evaporated skimmed milk and coconut oil."

Senator McKinley: Read it all.

Mr. Balderston: Do you want everything?

Senator McKinley: Yes; certainly.

Mr. Balderston: "Contains 6 per cent coconut oil; 24 per cent total solids. Interstate Milk Products Co., Madison, Wis." (I might state that, from my own knowledge, that is an offshoot of the Valecia Evaporated Milk Co., which manufacture milk products. This Interstate Milk Products Co. being a sales organization.)

Senator McKinley: Is that all that appears on there?

Mr. Balderston: "Do not use for infants." "For cooking and baking." There is some French on here, some German, and I presume some Italian. So far as the German goes, at least, I know it to be a translation of the statement: "Do not use for infants."

A small can of this contains this same warning: "Do not use for infants," in very small print, but I have never found a storekeeper that had read it.

I want to refer to the method by which this Valecia Evaporated Milk Co. was endeavoring to push this compound in the Philadelphia market last fall. There was a big food show, and this company had two demonstrators, nice-looking young ladies, behind the counter of their booth. They were

evidently employees of this company. These demonstrators were shouting their wares—"Three cans of milk for a quarter; three cans of milk for a quarter." I went up to the counter, and I said, "I will take three cans of milk." And I picked up three cans of the Golden Key milk. "Oh, no," she said, "don't take that; we are selling two cans of Golden Key milk and one can of Silver Key milk. We have put them up in triangles like that on the counter." I said, "Why can't I have three cans of Golden Key milk?" She said, "This Silver Key is a new kind of milk that we are trying to introduce." I said, "What is the idea?" "Oh, this is a new brand; we sell you these two of Golden Key for a quarter and we give you this one of Silver Key to introduce it." I said, "What is the difference?" "Oh," she said, "no difference, except that it is cheaper."

Now, the big claim of the manufacturers is that they are not responsible for the practices of unscrupulous or ignorant retailers, but here we have the manufacturers themselves, through their own paid agents, in the most unscrupulous manner endeavoring to sell Silver Key compound as legitimate milk. I have a picture of the ladies here and the cans, and will pass it around to show exactly what these companies are endeavoring to do. Many of these companies claim that they are not responsible for its use for infant feeding occasionally, because they themselves warn people, as, for instance, in the case of the Silver Key manufacturers, or the Hebe people.

I have here a copy of a letter which was sent to me by the American Friends Service Committee. This is an organization which has been doing child feeding abroad ever since the war; in fact, during the war they were doing it in France, and they have kept it up all over Europe ever since.

(The letter referred to is as follows):

American Friends Service Committee,
Philadelphia, Pa., December, 17, 1921.

Robert W. Balderston, Philadelphia Interstate Dairy Council, Philadelphia, Pa.

DEAR FRIEND: In reply to your inquiry, I can advise you that the World's Oceanic Corporation, of 170 Broadway, New York City, have made several efforts to sell to the American Friends Service Committee, of Philadelphia, Pa.,

for child-feeding in Europe large quantities of Carolene milk to be used as a substitute for our regular evaporated milk. They stated that it was a skimmed milk, but that the butter fats were replaced by vegetable oils, making it a satisfactory product at prices somewhat cheaper than other brands.

Very truly yours, James A. Norton, Assistant Secretary.

Mr. Balderston: There is a definite effort on the part of these manufacturers to put into the hands of these poor, undernourished, starving children abroad this compound, which would in no case permit the growth which it would be expected they would get from these American dairy products. From our own experience in child feeding I know that 30 per cent, by weight, of all of the products bought by Hoover's organization was condensed and evaporated milk.

Here are other brands manufactured by other companies, No-Ko, Majal, and En-Zo. Those are the common brands offered for sale at the present time in most of the eastern cities.

I have here a photographic copy of a label which came to us from one of the far Western States. It bears this statement: "Skimmed milk, United Sales Agency, Seattle, 1 pound net weight," then, with a rubber stamp, "U-nite-o Brand, a compound of evaporated skimmed milk and vegetable fat," very faintly across at the bottom of it. This label came from a can which, when this label was taken off by soaking, was found to have a Carolene label underneath. The statement comes to us that the Carolene had gone out of style out there due to the fact that the people were finding out its true nature, and they had this new label pasted over the top with "skimmed milk," and then so faintly that the average consumer would not see it. "A compound of evaporated skimmed milk and vegetable fat." You can see how very faint was that statement of what were the actual contents. [Indicating.]

The Hebe people have made the great claim that they are warning the customers as to what is the nature of their product.

Just recently—on the 22d of May, to be exact—in purchasing this compound in Philadelphia one of our investigators bought Hebe from the stores without any such warning on it, showing that their claim they are so careful to

protect prospective customers is unfounded, and that you can still buy Hebe itself, as well as these other compounds, without that warning.

We bought some of the same material without the warning in last December, showing that this was not just a chance can.

I wish now to show you how carefully they have simulated the legitimate product.

This is a can of dairymen's league evaporated milk [producing can], made by the Dairymen's League Cooperative Association, which is composed, as you know, of a great number of farmers all over New York State and northern Pennsylvania. If I had a large can of dairymen's league milk I could show you how closely as to color was the Nu-tro manufactured by the Indiana Condensed Milk Co., of Indianapolis, Ind. There is the same shade of blue and the same canary yellow, so that a customer would go in and say, "I want that yellow brand of evaporated milk," and would point to this, just the same as a customer would [fol. 489] go in and say, "I want the Key brand," with no appreciation of the difference between "Silver Key" compound and "Golden Key" milk.

Here is a photographic copy of various of the Hebe labels showing the efforts that they have made to try to advise the public, some of them with and some of them without "Do not use for infants." That is simply for the records.

I have here a label of Enzo, which has up in one corner "Imitation milk," showing that in some States where a certain law is in effect manufacturers have to admit that it is simply an imitation product.

I will submit photographic copies of the labels for your records.

Mr. Balderston: I can leave some cans if you want them. If any of you are interested, I would like to show what legitimate evaporated milk looks like and how these cans compare when set up on the shelves. Here is a can of Carnation, manufactured by the same company as Hebe.

We have here a couple of photographs which show the great danger to the public in the use of these compounds in bulk. We have no means of knowing just where and when and how the merchandising of these compounds in bulk is carried on. We did, however, last summer, find that Enzo was being used in the restaurants which supplied the farmers at the Wilmington State Fair at Wilmington, Del. We

took photographs of the Enzo on the kitchen tables being used in the making of the clam soups and for putting in the coffee which the farmers themselves were using at the tables out front, the farmers not knowing the difference. We even found a can of Enzo on one of the tables in the restaurant, with a hole punched in one end of it, for the farmers to put into their coffee. Here is the Enzo [indicating on photograph].

Senator Kendrick: And is that a picture of the farmer?

Mr. Balderston: A picture of the farmer, right out front, a Maryland farmer.

Senator McKinley: I wonder if that is the farmer who is selling the milk to us at 17 cents a quart?

Mr. Balderston: No; I think he sold it to the dealer at about 6 cents a quart, and he is selling it about 11 cents.

We have a photograph here of the advertising methods of the storekeepers, the retailers. These retailers do not observe the law, which compels them to state what is on the label. They refer to compounds as evaporated milk. When you go in to buy, they refer to compounds as "Carolene" milk, or Ny-Ko milk, or evaporated milk.

I will submit this group of advertisements in evidence, and you can see that the compounds are advertised together with the legitimate brands as a part of their advertising copy which they have in the daily press.

This survey covers Richmond, Va., Minneapolis, Minn., Perth Amboy, N. J., Fargo, N. Dak., and Pittsburgh, Pa., showing that this fraudulent practice on the part of the storekeepers is universal throughout the United States.

Senator McKinley: Who is it that makes filled cheese?

Mr. Balderston: Filled cheese is out of date, Senator.

Senator McKinley: Nobody makes it now.

Mr. Balderston: Filled cheese was made a generation ago, and people who were in the dairy business at that time tell me it was the endeavor on the part of those who made the filled cheese to sell it abroad, in the European markets as full cream American cheese, that ruined the European market for American cheese, because the Europeans found that they were having a substitute foisted upon them, and they would not take any American cheese.

I have here before me a report of the dairy laboratories of Philadelphia on some samples of ice cream which were collected in New Jersey last summer. This ice cream was

bought from the regular sources. We found that in two cases out of ten samples the fat was not butter fat, but it was some form of vegetable fat, and we have here the letter of the chemist who made the examination of the products. The samples themselves were taken by Mr. A. A. Miller, who is on my right here. He is the man who made the survey, showing that in many of our States where they do not have adequate State laws, we are going to have, until we get legislation which will prevent it, ice-cream which will contain no cream at all, but which will be made from these compounds. Of course, when you buy a plate of ice cream, there is no label on it, as we all know.

I have here, and wish to present in evidence, a letter from Mr. C. Lincoln Furbrush, director department of health of the city of Philadelphia. The letter is dated June 23, 1922, and reads:

Department of Public Health,
Office of the Director,
Philadelphia, June 23, 1922.

Robert W. Balderston, Esq., Secretary, Philadelphia Interstate Dairy Council, Philadelphia, Pa.

My Dear Mr. Balderston: In compliance with your request as to the department of public health's attitude toward the adulteration of milk; I beg to inform you that the department disapproves the sale of adulterated milk in any form. Milk from which butter fat has been removed and to which has been added compounds containing vegetable fat as a substitute for the natural milk content, is classed as adulterated milk.

Regulations governing milk as classified by the department of public health of Philadelphia have been made in the interest of and for the conservation of public health and any form of adulteration or the lowering of standards, we believe, would be detrimental to health, especially to little children.

Every effort should be made to increase the standards governing the production, handling and sale of milk and its derivatives.

Yours very truly, C. Lincoln Furbush, Director.

Mr. Balderston: I now want to refer to some cases, showing what happens when children are not fed the proper amount of full milk products.

Senator McKinley: That is already in the record before the House committee is it not?

Mr. Balderston: No; this was not in the House committee record.

Senator McKinley: Did not somebody else testify about this?

Mr. Balderston: No; we found this in Philadelphia since the House hearings were concluded. This is a case where Hebe and Carolene were bought by foreign-born women and fed to their children.

We have here the nutrition charts of two children, through a study of which we found these cases. These children were in the camps for undernourished children, conducted by the city, on the city farm just outside of Philadelphia. They were sent there last summer because of their undernourished condition. In investigating the situation in the homes, we found that it was the practice of the mother to feed her children on the evaporated milk which she bought in the store in cans. The storekeeper had been selling her Hebe and Carolene compounds in place of evaporated milk. We will submit these charts, if you care to have them, for the record. These are simply copies of the charts of the nutrition specialists who are in charge of these cases, and here is a statement concerning those cases, which we will also put in the record.

Undernourishment and Filled Milk Feeding, by A. A. Miller

Early in 1922 Miss Edith M. Howes, a nutrition worker associated with the Philadelphia Interstate Dairy Council, Philadelphia, Pa., found, in the course of her regular duties, feeding of filled-milk compounds to infants and children in that city.

Miss Howes, prior to her association with the Philadelphia Interstate Dairy Council, was similarly engaged with the Philadelphia Health Council, being in charge of nutrition work in Philadelphia public schools and directly associated with the nutrition work at "Camp Happy," Torresdale, Pa. This was a summer camp established and conducted by the department of public welfare through the cooperation of the Philadelphia Health Council, where several hundred

undernourished children were materially aided in regaining their normal health.

In following up the results of this work to ascertain continued health gains by the various children Miss Howes found several cases where children had not even sustained the gains made last summer, and in instances found that these children were being fed milk substitutes, such as Carolene, Hebe, etc.

Two outstanding cases were noted in which not only the children that attended Camp Happy received these substitute foods, but whole families, including infants in arms, were so fed.

These cases are interesting enough to claim special mention.

[fol. 496] The Case of the B Family

This family resided in one of the poorer districts of the city. It consisted of father, mother, two daughters aged 10 and 9, and baby in arms. The mother voluntarily stated that she and all the children, including the baby, were fed milk compounds for breakfast and lunch. The family is Austrian, knows little of diet, and is in meager financial circumstances.

One of the children had usually made the purchases of the compound. The seller of the so-called milk stated that the particular brands sold were "good for children and everybody." "Good as all other evaporated milk, and better."

One of the above sisters was in Camp Happy in the summer of 1921. At the time she went to the camp she was 6 per cent under weight, attaining practically normal weight at the close of the camp.

In March, 1922, this child was again under normal, being 9 per cent under weight for her age and height.

The Case of the E Family

This family consists of father, mother, three daughters, aged 8, 7, and 6 years, an infant of 17 months, and a sister's child, aged 5 years. The mother stated that all the children, including the infant, were being fed compounds. One of the older children was in the Camp Happy nutrition camp in 1921.

On entering the camp this child was 6¾ pounds, or 15 per cent, under weight. After correction of physical defects, she almost gained normal at the close of the camp.

In January, 1922, the records show this child was 7 pounds under weight, representing a further decline than at the time she entered Camp Happy last year.

References to these outstanding cases were made by those urging the passage of bills before State legislatures prohibiting the manufacture and sale of filled-milk compounds. Opponents of these bills attempted to refute these statements, and in order that the same might be fully substantiated the following sworn statements were obtained:

Report of Investigator in re Imitation Milk—The Case of Lea Broad

The Broad family resides at 755 South Fourth Street, Philadelphia, occupying the third floor. The location is in one of the poorer districts of the city.

The survey developed that the family, consisting of father, mother, two daughters, aged 10 and 9, and baby in arms, used milk compounds. Mother stated that the baby was given Carolene warm for lunch, and sometimes for breakfast. Lea, aged 9, likes it and drinks it; also, her sister. Sometimes the mother gives it to them mixed with warm water. Mother states that she also used Hebe in small cans.

Lea's Own Story

Investigator went with Lea to the store where Carolene was bought—Samuel Saler, 768 South Fourth Street, Philadelphia, Pa., egg, butter, and meat market. Child pointed to Carolene on shelf, marked 9 cents. Dealer also had Every Day, 11 cents. Dealer stated that Carolene was good for children and everybody. Good as all other evaporated milk; in fact, better.

Social History

The family is Austrian and has been in Philadelphia only 15 months. Knows nothing about diet. Family in meager financial circumstances.

Medical History

Has been suspected of tuberculosis process in both upper lobes, shown by X-ray of chest. Von Pirquet test positive.

Chronic bronchitis. Later diagnosis of physician showed asthmatic condition.

Case of Englehart Family

Family consists of father, mother, Frances, aged 8; Theresa, aged 7; Mary, aged 6; Elinor, aged 17 months; also sister's child, James, aged 5.

Father works at night; wages, $17 per week. Children attend St. Joseph's Parochial School. Use Hebe and Every Day. Hebe is used for everything when they buy it. Children all get it. Use it in coffee; all the family, including the baby, have coffee every day. Theresa, aged 7, was in nutrition class last year and is still 7 pounds under weight.

Whole family very pale and anemic. Family resides at 512 South Hancock Street, one of the poorer districts of Philadelphia.

Edith M. Howes.

Sworn and subscribed to before me this 4th day of February, 1922. W. H. Henderson.

Mr. Balderston (continuing): The statement is made that this material furnishes the market for skimmed milk for the farmer. The evidence which was developed in the hearing before the Supreme Court in Wisconsin, on behalf of the Hebe Co., itself, showed that last year they purchased only 2 percent of their products as skimmed milk. The rest of it was bought as whole milk, the same as they bought the whole milk for evaporating into the whole milk product. The proposition that it furnished a market for farmers' skimmed milk that otherwise would go down the sewer is wrong, because we have shown you that they put these compounds on the same shelves with the milk, and the storekeepers sell it to the consumers as the milk; and, when we are through, the sum total of the skimmed milk sold in the compound is just the same as if it had all gone into the legitimate evaporated milk and been sold in it. On the other hand, there has been sold, in place of the butter fat, the coconut fats, which come from the islands of the sea.

The skimmed milk which goes into hog and calf and chicken feed is not a wasted product at all. We farmers raise our pigs on skimmed milk to make your pork. We are learning now that skimmed milk is one of the best foods for

young chickens. You Senators like milk-fed chickens——

Senator McKinley: Oh, I am a farmer, too.

Mr. Balderston: But you do not live near enough to your home so that you can eat your own chickens, I suppose, which is the same situation which other people are in who have to live in Washington. So we always have used, and always will continue to use a large portion of our skimmed milk as food for animals on our farms. I saw some sensational stories in the newspapers about skimmed milk going down the sewers. That was only in cases where the milk got sour in a city on a hot day like this. In that event, it is dumped down the sewers, because there are not any hogs in the city to consume it; and if you had them there you could not give them a regular supply, because it is only the occasional emergency that forces skimmed milk to be wasted.

I have here a pamphlet which the Hebe Co. published. It is a compilation of copies of letters which the Hebe Co. sent out, warning their trade as to the grave dangers incident to the sale of this product, warning them how they must sell it, that they must not advertise it as milk, etc., showing that they themselves recognize that they are handling a product like gunpower in that it is a product which can not be merchandised through the regular channels. Among some other things here is a letter in which the Hebe Co. admits that people wrote them letters with pictures of their babies that they claim were fed on Hebe, and in this letter the Hebe Co. itself warns people that it is not good food for child feeding and advised them to use the legitimate product.

In conclusion I have a survey here which has been made in the Philadelphia territory. This was not incorporated in the previous record. First is a statement by Mrs. Tillman of Philadelphia. She recently went into some stores in the colored district, and I have her sworn testimony here as to what the storekeeper said.

She went into the store at Joe's, 1348 South Street, on the 22d of June, 1922, and this is what she reports:

Sells Ny-Ko. Two clerks anxious to sell. Both stated that Ny-Ko was a good 'milk,' only cheaper in price. One clerk said you can use it for anything without running any risks. Asked if it could be used for babies, and was told it could.

"A woman customer noted the cautionary phrase on the label and said, 'Why, this reads not good for babies.' The clerk stated that he had never read that on the label before. After the woman departed, the clerk said, 'it was a very safe milk' and stated that women had bought it and gave it to their babies, and he had never heard any complaint before."

Mrs. Tillman bought a can of Ny-Ko, paying 8 cents for it.

[fol. 491] She went into the store of N. Azarva, on June 22, 1922, at 1212 South Street, and this is her report:

"He sells Silver Key and Carolene. Woman in store said Silver Key was as good as 'Peninsular.' The reason that it was cheap was that it was a Friday special—three cans for 20 cents. Was being run as a leader that day. Inquiry as to use for babies brought the answer that she had given it to her's. Assured me that I should certainly pay no more money because it was one of the best milks."

Mrs. Tillman went into the "Southwestern Market," at 1422 South Street, where the storekeeper said that Carolene was best and highest-priced milk.

She went into the New York store, at 1539 Point Breeze Avenue, and the storekeeper said there that Silver Key was one of the best milks; that it was as good as Borden's. Investigator said she preferred Borden's. Man said great mistake not to buy it, said government had passed pure food law and she would be running no risk, and they would not handle Silver Key if it were not the best, showing that they thought that at the present time they are entirely protected by Government laws.

Mrs. Alexander made a survey over in Camden. She covered some stores there, and in one that she visited she was told that he had Silver Key. She bought a can for 6 cents. The storekeeper said, "Hebe is a bunch of junk, but Silver Key is all right," the latter, of course, being what he had.

She went in Bozarth's, at 1200 Haddon Avenue, where she was told that Carolene was very rich and good; that you do not have to use as much as other brands, and that the seller always uses Carolene for everything.

Among other stores visited was the store of a man named Ribbler, at 448 Market Street, Gloucester, N. J. She bought

Ny-Ko. He said that "Ny-Ko won't harm babies; it is equal to Silver Key and Hebe."

She went into a store at Orim's, 17 Burlington and Cumbig Street; bought Majal. The storekeeper there said, "It can be used for babies, but Borden's is better."

These are the exact statements which the storekeepers made recommending their products.

Miss Edith M. Howes visited a number of stores in southeast Philadelphia, Miss Howes being a nutrition worker doing social work.

One storekeeper, at Second and South Streets, told her that Silver Key was just as good as Hebe; that they recommend it, but that it is not for children; that it says so on the label.

You see, he had looked it up.

She went in Pelberg's store, at 724 South Fourth Street, where the storekeeper said that Hebe and Silver Key were good milks; best sellers; that they sell a lot; that the big company sells a whole lot; just as good as others, and cheaper; good for babies.

I have here a survey conducted by Mrs. Emily P. Stoeser, that supports the proposition that it is the poor and ignorant foreigners who buy it.

I wish to introduce all of those surveys.

(The surveys referred to are as follows:)

	Total calls	Per cent compounds sold	Hebe	Nutro	Enzo	Car	Standard brands	Nyco
Camden, Feb. 18, 1921								
Group 1. Better grade residences, located in better class residential district	4	None						
Group 2. The Little Store, poorer district, 1118 Kargus Avenue	3	33⅓	10			10	13–14	
Group 3. Economy Store, medium class, 406 Market Street. (Hebe and Carolene are good milk; there are better grades; Nutro very good milk)	1	100		10			12–13	
[fol. 491]								
Newark, Feb. 25								
Group 1. Middle class	4	None						
Group 2. Good residential section	4	None						
Group 3. Poorer section	4	75						
Small Stores, 21 Boston Avenue. (Good as any other brand evaporated milk; good seller; cheaper; well recommended)	10			10			12–13	
No name, 58 Boston Avenue. (Very good seller; always come back for more; just as good as any other brand of condensed)	11			11			13	
On outside, 62 Boston Avenue. (As good as any other brand condensed milk)	12	13		12				
Group 4. Russian Jew, 68 Prince Street	10	10						
Group 5. Corbins, 411 Washington; good neighborhood. (Very good seller; better than any other brand of condensed milk)	7	14		10			13	
Paterson, Feb. 25								
Group 1. Main business section. (Big seller; just got fresh supply; nobody ever complains of it)	11	None						
Group 2. Fair business section, Corbins, 323 Main Street	6	10						

	Total calls	Per cent compounds sold	Hebe	Nutro	Enzo	Car	Standard brands	Nyco
Group 3. Metropolitan, 232 Main Street. (Ny-Co is very good; takes place of condensed)	4	25		10			12-13	
Jersey City, Mar. 24.								
Group 1:								
Good residence section								
Grocery, 222 Newark Avenue. (Sells 3 cans for 29 cents. If it was not as good as other condensed, people would not come back for more. Big drive at 3 for 25 cents. Only milk sold. Tremendous sales).	10	10		9½				
Group 2. Poor. (Sell enough to recommend it; takes place of any condensed)			10					
Group 3. High grade. (Just as good as any condensed)	9	11						10
Group 4. Middle class	6	None	7					
	10	None						
Perth Amboy, Mar. 25.								
Group 1. High class	7							
Group 2:								
Middleclass. Foreign, 32 South Street. (Very good; takes place of Libby's or Borden's)			11				9 (3 for 25¢)	
[fol. 492]								
Perth Amboy, Mar. 25—Continued.								
Group 2—Continued.								
Foreign, 38 South Street. (Both good milk, but not as good as some others)			10				12-14 3 for 25¢	
No name, 339 South Street. (Good sellers; just as good as any other condensed. Same as evaporated cream; sell a lot)			11				13	11

No name, South and Walnut Streets. (Sell more than any other grade of condensed)			10	13	10
289 South Street. (One condensed good as another. Sell more this because cheap)	10	10	10	13	
No name, 189 New Brunswick. (Others higher priced, but these just as good)				13-14	
Grocery, 48 High Street. (Very good; takes place of condensed)	11		10	13	
Economy, 361 State Street. (Good as any other condensed milk, man bought 6 cans. See advertisement)	11	11	3 for 25¢		
Groceries, 343 State Street. (Very good seller. (Not as good as Libbys)	11	3 for 25¢		12- 13	
No name, 434 State Street. (Fine, elegant milk)	3 for 25¢		3 for 25¢		
444 State Street. (Very good. As good as any other condensed)	3 for 25¢			13- 14	
F. Blum, 460 State Street. (Best seller ever)		10			11
Grocery, 487 State Street. (Just as good as Star condensed)	11			13	
Giner, 518 State Street. Good as any condensed; use it for everything you would use any other condensed)	10	10	10		

STATE OF PENNSYLVANIA,
County of Philadelphia:

Emily P. Stoeser, being duly sworn according to law, deposes and says that the facts set forth in the foregoing schedules are correct and true to the best of her knowledge and belief.

Emily P. Stoeser.

Sworn and subscribed to before me this 28th day of June, 1922. W. H. Henderson, Notary Public. My commission expires March 31, 1923. (Seal.)

	Number calls	Per cent selling compounds	Brand				
			Hebe	Car.	Nutro.	Enzo	Standard
Ardmore, Pa.							
Group 1: (a) Hubb Stores, Lancaster Pike (recommended as very good)	2	50	6–11				13
Brookline							
Group 1: (a) Gills Market, Darby Road (sold on demand, but not recommended)	1	100	13				14
Philadelphia							
District 1: Better class stores	6	None					
District 2:							
Seltzers, 982 North Second Street (takes the place of condensed)	11	85					
(a) Brennens, 948 North Second Street (just as good as condensed and much cheaper)			6–11				7-14
(b) Sloski, 914 North Second Street (on the shelves with other milk; priced; store crowded; no comment)			6–11				7-14
(c) Grocery, 812 North Second Street (said was cheaper than any other brand)			11				
(d) Bauer & Harrison, 620 North Second Street (Hebe no good; only skim milk; keep it because people want something cheap)			11				7-14
(e) Small stores (428 North Second Street)			6–11				
(f) No name, 519 North Second Street (good; cheapest thing in the market)			6–11				13
(g) Displayed, 448 North Second Street (takes place of condensed, nothing better on the market)			6–11				13
(h) 308 North Second Street (good; cheapest condensed on the market)			6 11				
(i) 202 Vine Street (recommended; is very good; same as any other milk)							

Philadelphia group survey, December 24, 1921—Continued

	Number calls	Per cent selling compounds	Brand				
			Hebe	Car.	Nutro	Enzo	Standard
District 3:							
(a) Dein, 225 North Second Street (recommended Hebe highly)	8	60	6–11				14
(b) 158 North Second Street (cheap; takes place of condensed)			6–11				7–14
(c) Small stores, 39 North Eighth Street (selling damaged label cans at reduced prices)			8				
(d) No names, 306 North Ninth Street (just as good as Every Day milk)			11				14
(e) Displayed, 1241 Vine Street (nothing better on the market)						11	
District 4:							
(a) Sixteenth and Christian Streets (everybody seems to like it)	21	60	11				
(b) Seventeenth and Christian Streets (just as good as any other brand and cheaper)			16				
(c) 1224 South Twenty-first Street (cheap milk; not displayed with other brands; stock under counter)			13				
(d) Links, Sixteenth and South Streets (Carolene just as good as other milk)				11			
(e) "Sams," Broad and South Streets (both Carolene and Hebe good as any other condensed milk)			11	11			
(f) "Joes," 1348 South Street (just as good and cheaper than other brands)			7–11				
(g) 1328 South Street (cheaper and better than other brands; everybody comes back for Hebe and Carolene			6–11	6–11			
(h) Reubens, 1319 South Street (they take the place of condensed milk)			6–11	6–11			
(i) All grocery, 1542 South Street (Hebe best seller)			7–12				
(j) Stores No. 1212 South Street (cheap and just as good as any other brand condensed milk)			7–11				
(k) Names displayed, 1208 South Street (if you want something cheap take Hebe; good as any other milk)			11				

(d) Names displayed, 1102 South Street (cheap, but not as good as Every Day)

[fol. 493]

District 5:

High-class residential

District 6:

High-class residential

District 7:

Industrial—

(a) Strang, 2430 Kensington Avenue (Hebe, good milk; just out, Nyco. Good seller. Ordering more)

(b) Manhattan, 2727 Kensington Avenue (very good; good as any other condensed)

(c) Small grocery, 2614 Richmond Street (recommended as fine. Just received shipment)

11

12. None

15. None

11 11

11

5

STATE OF PENNSYLVANIA,
County of Philadelphia:

Emily P. Stoeser, being duly sworn according to law, deposes and says that the facts set forth in the foregoing schedules are correct and true to the best of my knowledge and belief.

Emily P. Stoeser.

Sworn and subscribed to before me this 28th day of June, 1922. W. H. Henderson, Notary Public. My commission expires March 31, 1923. (Seal.)

	Nyco.	Hebe.	Car.	Nutro.	Enzo.	Silver K.	Majal.	Pet.	Bor.	Health milks	Caran.	Sharp.	Suns.	Miana.	G. K.
S. Merswitz, 303 Lombard (no compounds)															
Bilker, 526 South Third dutie (no compounds; only Every Day)															
322 Lombard (no compounds)															
428 South Fourth Street (had Hebe; no sales; sent back after 3 weeks)															
510 South (no compounds)															
412 Bainbridge (no compounds; only Every Day)															
312 Lombard (no compounds; only Every Day)															
Meersand, Fourth and South Streets (no compounds)															
Jenkins, 606 South Third Street (no compounds)															
Cohen, Fourth and Bainbridge (no compounds; Bordens only)															
S. Uhlman, 209 Lombard Street (did have Hebe, but sold out; Carolene and Silver Key just as good as Hebe, Bordens and Every Day; better than others)															
Second Street Market, Second and South Streets (stall at extreme southwest corner). (Silver Key just as good as Hebe; we recommend it. No; its not for children; says so on the label. Recommend for coffee and cooking; Nyco a dandy milk as good as Pet and same price)															

N° 11 10

10 9 10 10½

825

	Nyco	Hebe	Car.	Nutro	Enzo	Silver K.	Majak	Pet	Bor.	Health milks	Caran	Sharp.	Suns.	Miana	G. K.
Southwark Meat Market, 214 South Street. (No Hebe; Ezno, and Hebe different as day and night from Health milk. Give children "Health milk," other kinds not as good; can taste difference; S. K. as good as Sharpless; good for children. Yes; a good milk; Hebe not as good as Sharpless or Carnation; has oils, etc.)															
228 South Street							9						10		
622 South Fourth Street. (Hebe just as good as others; all alike; good for children)							9							10	10
F. Gross, 612 South Fourth. (Silver Key just as good as others; good for babies; sure evaporated milk; good for everything.)		X		X		X			X		X				
620 South Second. (Hebe named among other brands sold; said Hebe not sold as evaporated milk, but skimmed milk)		10													
727 South Second Street. (Recommended Hebe for babies)		10													11
Cohen, 216 Bainbridge. (Not find any better on market; good for babies; we recommend it)		7		11					13						
Baron, 514 South Third Street. (Hebe too cheap; no demand)							11								
Second Street Market, stall in middle against wall, west side. (Good for children; good for everybody; for babies, yes; for everything; Englehart family buys here)							10				11			11	

Pelberg, 724 South Fourth Street (good milk; best seller; sell lot; big company, sells whole lot; just as good as others and cheaper; good for babies)	9	9
16 South Fourth Street (good for children and everybody; good as all evaporated milks; better)	9	
Samuel Saler, 768 South Fourth Street (Broad family buys it here)	9	

STATE OF PENNSYLVANIA,
County of Philadelphia:

Edith M. Howes, being duly sworn according to law, deposes and says that the facts set forth in the foregoing schedules are correct and true to the best of my knowledge and belief.

Edith M. Howes.

Sworn and subscribed to before me this 28th day of June, 1922. W. H. Henderson, Notary Public. My commission expires March 31, 1923. (Seal.)

Survey of shipyard workers largely Gloucester, N. J., December 27, 1921.

Firm.	Hebe.	Car.	Nutro.	S. K.	Majal.	G. K.	Bor.	E. D.	Prod.	Pet.
Gloucester, N. J.										
400 Broadway (don't carry any brands but Bordens; small store)										12
338 Broadway (carry no compounds when asked for Hebe milk; only Pet)									6	12
Schnell, 230 Broadway (as good as Hebe milk; can be used for babies, although condensed is to be recommended; excellent for general use)				10						
Heimer, 533 Market Street (do not carry any compounds)										
Rubin, 540 Market Street (do not carry any compounds asked for; no comment)										
Ribbler, 448 Market Street (Nyco won't harm babies; equal to Silver Key and Hebe)										
339 Market Street (don't carry any of brands (compounds) asked for)										
Schneider, jr., 155 Burlington (do not carry mentioned brands)										
Jno. McKenny, Burlington and Cumbig. store (does not recommend for infants; excellent for general use)				10						
Orims, 17 Burlington and Cumbig. store (can be used for babies, but Bordens is better)								10	12	
Willow and Burlington (saleslady said emphatically, do not use for babies	10									
220 Middlesex (cheaper than other brands, but don't recommend for babies)				5–10						
Salmon's, 125 Burlington (does not sell compounds of any kind)										

Survey of shipyard workers largely Gloucester, N. J., December 27, 1921—Continued.

Firm.	Hebe.	Car	Nutro.	S. K.	Majal.	G. K	Bor	E. D.	Prod.	Pet.
Economy Stores Co., Burlington and Powell (not good for babies, but if Hebe has been used this may also be used)						9				
Stanger, 302 Burlington (do not handle any compounds)						9				
322 Essex (do not handle mentioned brands)										
426 Hudson (do not handle mentioned brands)										
Broadway and Hudson (do not handle mentioned brands; Hebe not good)										
501 Broadway (do not carry mentioned brands)										
Champion Road and M. Good (keep only Bordens)										
Gilmer, 501 Somerset (do not carry anything but Pet and Bordens)										
Atlantic and Cum. (don't recommend for babies as it is not pure, but is passed by the State as food)										
Martin Cook, 236 Cumberland (carry only Every Day)						10				
226 Cumberland (does not handle any canned milk; sell bottled milk only)										
215 Cumberland (did see Nutro, but had no call for such stuff; nobody wanted 10-cent milk)										
Almar Stores, 30 Burlington (don't keep any brands asked for; newest brand Pleasant Valley)						10				
29 Sussex (don't carry compounds; no call for them)										
Fourth and Hunter (does not carry brands mentioned)										
W. T. Moore, Fifth and Hunter (does not recommend for babies; nothing like Pet or other brands pure milk, but cheaper)										

Firm.	Hebe.	Car	Nutro.	S. K.	Majal.	G. K	Bor	E. D.	Prod.	Pet.
Economy Stores Co., Burlington and Powell (not good for babies, but if Hebe has been used this may also be used)										6
Stanger, 302 Burlington (do not handle any compounds)										
322 Essex (do not handle mentioned brands)										
426 Hudson (do not handle mentioned brands)										
Broadway and Hudson (do not handle mentioned brands; Hebe not good)										
501 Broadway (do not carry mentioned brands)										
Champion Road and M. Good (keep only Bordens)										
Gilmer, 501 Somerset (do not carry anything but Pet and Bordens)										
Atlantic and Cum. (don't recommend for babies as it is not pure, but is passed by the State as food)										
Martin Cook, 236 Cumberland (carry only Every Day)										12
226 Cumberland (does not handle any canned milk; sell bottled milk only)										
215 Cumberland (did see Nutro, but had no call for such stuff; nobody wanted 10-cent milk)										
Almar Stores, 30 Burlington (don't keep any brands asked for; newest brand Pleasant Valley)										
29 Sussex (don't carry compounds; no call for them)										
Fourth and Hunter (does not carry brands mentioned)										
W. T. Moore, Fifth and Hunter (does not recommend for babies; nothing like Pet or other brands pure milk, but cheaper)						10				12

South Camden, N. J.

Polish, 530 Kaighns Avenue (have no brands asked for)
618 Kaighns Avenue (only have Every Day)
727 Kaighns Avenue (do not carry Hebe; it is impure, only a compound)
741 Kaighns Avenue (don't handle any compounds)
Polish, 763 Kaighns Avenue (don't handle)
1028 Kaighns Avenue (don't handle any brands asked for)
1004 Kaighns Avenue (don't handle any brands asked for)
1240 Kaighns (sell Pet, but no Hebe milk; Pet same as Hebe)
Epstein, 1228 Kaighns Avenue (do not handle any brands asked for)
J. Weiss, 1210 Haddon (Hebe is a bunch of junk; Silver Key all right, same as Borden; people return Hebe)
Bozarths, 1200 Haddon Avenue (Carolene very rich and good; don't have to use as much as other brands; seller always uses Carolene for everything)
Quality Shop, 1258 Haddon Avenue (handle no compounds)
Parkway, 1069 Haddon Avenue (does not handle brands asked for; only Pet, Bordens, and Everyday)
1017 Mount Ephraim Road (does not handle any compounds)
Boger, 1129 Kaighns Avenue (never heard of Hebe milk; sells Bordens)
1027 Kaighns Avenue (does not handle any brands asked for; sells Pet)

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STATE OF PENNSYLVANIA:
County of Philadelphia:

Margaret J. Alexander, being duly sworn according to law, deposes and says that the facts set forth in the foregoing schedules are correct and true to the best of my knowledge and belief.

Margaret J. Alexander.

Sworn and subscribed to before me this 28th day of June, 1922.

W. H. Henderson, *Notary Public*. (Seal.) My commission expires March 31, 1923.

Miscellaneous.

	Hebe	Car.	S. K.
Philadelphia.			
612 South Fourth Street (Hebe milk is good milk, by salesman; saleswoman said, "No; don't know; just from Russia." She said, "It's good lady; fine grade of milk; one best on the market")	X		
Same, Fourteenth and South Street (Hebe and Carolene on display; Carolene only good for cooking)	X	X	X
Southwestern Market, 1422 South Street (Carolene best and was highest price milk)		X	
Cohens, Eleventh and South (stated that Carolene was a good, cheap milk)		X	
New York Store, 1539 Point Breeze A (Silver Key one of the best milks; good as Bordens; investigator said she preferred Bordens; man said great mistake not to buy it; said Government had passed pure food law and I would be running no risk, and they would not handle it if it were not the best)		X	
Almar, Wharton and Point Breeze (on display in window and store closed)		X	
Quaker, 1015 South Twentieth (No)			
Jacobs, Eleventh and Ellsworth Streets (No)			
Royal Groceries, Eleventh and Ellsworth Streets NW. (Carolene not as good as Bordens; only a cheap brand)			
N. Azarva, 1212 South Street (sells Silver Key and Carolene; woman in store said Silver Key was as good as Peninsular; reason, it was cheap was that it was a Friday special, 3 cans for 20 cents; was being run as a leader that day; inquiry as to use for babies brought the answer that she had given it to hers; assurred me that I would certainly pay more money, because it was one of the best milks			
"Joes," 1348 South Street (sells Nyco; two clerks anxious to sell; both stated that Nyco was a very good milk, only cheaper in price; one clerk said, "You can use it for anything without running any risk;" asked if it could be used for babies, and was told it could; a woman customer noted the cautionary phrase on the label and said, "Why, this reads, 'Not good for babies'"; the clerk stated that he had never read that on the label before; after the woman departed, the clerk said it was a very safe milk and stated that women had bought it and gave it to their babies and he had never heard any complaint before; bought a can of Nyco, paying 8 cents)			

STATE OF PENNSYLVANIA,
County of Philadelphia:

Margaret J. Alexander, being duly sworn according to law, deposes and says that the facts set forth in the foregoing schedules are correct and true to the best of my knowledge and belief.

Margaret J. Alexander.

Sworn and subscribed to before me this 28th day of June, 1922. W. H. Henderson, Notary Public. My commission expires March 31, 1923. (Seal.)

[fol. 495] STATE OF PENNSYLVANIA,
County of Philadelphia:

Madaline L. Tillman, being duly sworn according to law, deposes and says that the facts set forth in the foregoing schedules are correct and true to the best of my knowledge and belief.

Madaline L. Tillman.

Sworn and subscribed to before me this 27th day of June, 1922. W. H. Henderson, Notary Public. My commission expires March 31, 1923. (Seal.)

Mr. Balderston: I also wish to introduce in evidence a clipping from the New York Times of Thursday, March 30, 1922, which says that in the last census of 1920, it was shown that the foreign born who were unable to speak English amounted to 12 per cent of our total population.

(The clipping from the New York Times of Thursday, March 30, 1922, is as follows:)

Foreign Born Who Can Not Talk English Now Number 11 Per Cent of Population

Washington, March 29.—Eleven per cent of the foreign-born white population in the United States, 10 years of age or older, according to the 1920 census, was unable to speak English, the Census Bureau announced today. The number was 1,488,948, out of a total foreign-born population more than 10 years of age of 13,497,886. These figures compared with 2,953,011 non-English-speaking foreign-born residents, or 22.8 per cent of the total enumerated in the 1910 census.

The bureau attributed the decrease to several causes, citing that many immigrants who could not speak English in 1910 had since learned the language, died, or returned to their native countries; that the number who could not speak English arriving during the last decade was smaller than in the previous 10 years, and that a majority of these had come to this country prior to August 1, 1914, and therefore had had time to learn the language before the census was taken.

In Texas, New Mexico, and Arizona, where more than two thirds of the foreign white inhabitants were born in Mexico, the percentages unable to speak English were, respectively, 51.7 per cent., 49.4 per cent, and 51.9 per cent. The next highest percentages unable to speak English were spectively, 51.7 per cent, 49.4 per cent, and 51.9 per cent, while the smallest proportions were shown in South Carolina, 1.8; Georgia, 1.8; Kentucky, 2.2; North Carolina, 2.7; District of Columbia, 2.8; Washington, 3.2; Oregon, 3.3; Tennessee, 3.3; Montana, 3.4; Virginia, 3.7; Utah, 4.1; Alabama, 4.2, and Iowa, 4.3.

Mr. Balderston: Referring again to the survey of Mrs. Stoeser made in the State of New Jersey, the stores were divided into three groups, Group 1 being the good residential section, Group 2 being the middle class, and Group 3 the poorer section. In the first group no compounds were found, in Group 2 very few dealers sold the product, while in Group 3 the sales were usually quite large.

Senator McKinley: Is not this already in the House record?

Mr. Balderston: No; none of this is in the House record. This has not been introduced.

This covered Newark, N. J. She went down to the poorer sections, and she found that 75 per cent of the stores there sold these compounds, and among other statements made to her by these storekeepers is "As good as any other brand of evaporated milk; good seller, cheaper; well recommended."

Another storekeeper said it was a very good seller; they all will come back for more, and it is just as good as any other brand of condensed milk. Other storekeepers said that it is just as good as any other brand of condensed milk.

She then went to Perth Amboy, which, as you know, is a great industrial center, and one storekeeper there told her, this being in a store kept by a foreigner in the district where the foreign people live, "Very good; takes the place of Libby's or Borden's." Another storekeeper said, "Good sellers; just as good as any other condensed milk; same as evaporated cream; sell a lot."

The exact names and addresses of all of these storekeepers are in these records here. One of the storekeepers says that "they" are good sellers; just as good as any other condensed milk; same as evaporated cream, and that they sell a lot.

Mrs. Stoeser also conducted a similar investigation in Philadelphia, and I will submit it in evidence here, without reading from it.

Mr. A. A. Miller, who sits at my right, has been associated with me in these investigations; in fact, the whole survey here has been conducted under his supervision. It is his work. I will submit his proposition to you now in the form of a brief, so as to save your valuable time. It is a very brief and concise statement of the whole thing; so that if it can go into your record, it will save your time.

From the standpoint of public health, and from the standpoint of the dairy industry, this bill is one which commends itself to your consideration, and we ask your favorable report to the full committee.

I thank you very much, gentlemen, for having given me this time.

(The statement of Mr. A. A. Miller, editor the Milk Producers' Review, Philadelphia, Pa., and member of the publicity committee of the National Milk Producers' Federation, as submitted through Mr. Balderston, is as follows:)

Imitation Milk Products

[By A. A. Miller, editor The Milk Producers' Review, Philadelphia, member publicity committee, National Milk Producers' Federation.]

The menace to public health, the welfare of the State and to the dairy industry by the manufacture and sale of imitation or so-called filled milk has not been abated, notwithstanding the proposed safeguards in labeling and marketing methods which one large manufacturer, the Hebe Co.,

claims to have introduced. Other manufacturers, as a rule, continue to market their products through unchanged selling methods.

The menace of imitation milk can not be removed unless its manufacture and sale is prohibited by law.

Unscrupulous dealers are marketing these imitation milks in the same general way that they did a year ago. In fact, many flagrant cases of fraudulent misrepresentation have been shown in recent surveys. Not only have local dealers marketed these filled milks by unfair and fraudulent methods, but some of the manufacturers themselves have offered these products as milk, and one brand has even been recommended for child and infant feeding, as will later be referred to.

What is filled milk?—As the nature of these imitation or filled milks was so fully brought out at a hearing before a committee of the New Jersey Assembly during its last session, when a prohibitory bill was passed by both the assembly and the senate and failed in becoming a law only because of the refusal of the governor to sign the bill, it will only be necessary to refer to this subject briefly.

The imitation evaporated milks, which are known by such fanciful names as Hebe, Enzo, Majal, Nutro, Carolene, Nyco, and Silver Key, are manufactured from skimmed milk, the butter fat or cream having been removed from the whole milk and marketed either as cream or in the shape of butter, with an average market value of about 40 cents a pound, and the same replaced (in order to give the resultant evaporated product the semblance of whole evaporated milk) with a vegetable oil, usually coconut oil, having a value of approximately 11 cents a pound. The resultant compound is marketed in cans of identical size and shape as straight whole evaporated milk and labeled in the style of the whole milk product.

As an idea as to the extent of this business, which is stated as being only in its infancy, the following production figures are given:

Annual report production, in pounds, imitation evaporated milk

	Canned	Bulk	Total
1916	12,000	14,134,712	14,146,712
1917	18,504	17,489,064	17,505,568
1918	41,633,855	7,591,182	48,625,037
1919	62,262,221	2,748,120	65,010,341
1920	84,044,000	2,517,000	86,561,000

Outstanding Facts in Marketing Methods

1. Owing to the lower cost of production of imitation milk as compared to whole evaporated milk, the substitute product is usually offered, in a wholesale way, at a lower price than the straight brands of whole milk, but the consumer does not, as a rule, participate to any appreciable degree in this lower price, as retailers usually sell the imitation product just as they sell the genuine article, at the highest price the traffic will bear.

2. Notwithstanding the statements that the manufacture of filled milk provides a market for the farmers' skimmed milk, it has been definitely shown that on the contrary, these manufacturers invariably purchase whole milk from the [fol. 496] farmer, who is paid for it on the basis of its butter-fat content—not on the value of its skimmed milk—and that no skimmed milk, as such, is purchased for the manufacture of these products.

3. The sale of these products is largely among the ignorant, the poorly educated, and the foreign element, who when buying pay little if any attention to labels or what is printed on them. When such compounds are sold as cream, ice cream, or used in restaurants, for oyster stews and the so-called milk dishes, there is absolutely no means or method by which the consumer may identify the product.

4. The unscrupulous dealer, in the sale of the family size package, displays these imitation milks almost invariably on the same shelves in the store as he does the whole evaporated milks and because of the greater return in profit, recommends and urges the purchase and use of the imitation in place of the straight evaporated milk, often even if the selling price be identical.

5. The element of cheapness is less prevalent in the marketing of imitation milk than it was a year ago. In fact, higher prices are frequently obtained for imitation products than for straight milk.

6. From the standpoint of health, imitation milk lacks any appreciable quantity of the vitamines, particularly fat soluble A, an essential and absolutely necessary element for the healthy growth of infants and children.

7. From the economic standpoint, imitation milk is a menace to the dairy industry of many States.

Filled Milk Offered for Child Feeding

The recommendation of imitation milk for child feeding is not limited to unscrupulous retail dealers. A large export house in New York City has made several efforts, as late as December, 1921, to induce the American Friends Service Committee to purchase 30,000 cases of Carolene, to replace evaporated whole milk to be used for child feeding in Europe, claiming it to be a satisfactory product for this purpose at a price somewhat cheaper than other brands.

In many cases we have found retail dealers recommending imitation milk for child feeding. We have established definitely the use of Hebe and Carolene in the feeding of infants and children, notwithstanding the fact that in some cases the labels on the cans contained the cautionary phrase "Do not feed in place of milk for infants." Both Hebe and Carolene have been purchased as late as January 1, 1922, without this warning on the labels.

Filled Milk in Restaurants, Ice Cream, Etc.

The use of imitation milk in restaurants in the manufacture of ice cream and in table cream has been definitely established. The consumer has no means of knowing whether he receives imitation milk or cream in the dish served or in its preparation. The use of compounds as table cream has been established, while within the past month the presence of fats of the coconut oil group has been established in ice cream manufactured and sold in the State of New Jersey.

Nutritional Value of Filled Milk

There is without doubt a certain wholesome nutritional value in coconut fat and in skimmed milk. At the same time it has been established that they lack the necessary vitamines in sufficient quantity to sustain health and growth, such as is found in all whole-milk products.

Eminent dietitians have established the preeminent value of whole milk as the carrier of the absolutely necessary vitamines. Coconut oil is entirely devoid of these vitamins. Dr. E. V. McCollum, of Johns Hopkins Uni

versity School of Hygiene and Public Health, has established that these imitation milks or coconut-oil compounds lack any appreciable quantity of the food elements contained in butter fat in whole milk, the principal source of fat soluble A, and that such compounds are inferior to whole milk, either raw, pasteurized, powdered, or canned, and that their sale and consumption on the scale now common is a menace to the public health.

Marketing Survey

In making recent surveys it has been the purpose not only to extend the investigation beyond that carried on a year ago but also to obtain relative selling methods, as far as possible, from the same retailers from whom imitation milk was purchased a year ago. With but few exceptions selling arguments were found to be unchanged. Imitation milk has been variously recommended as follows: "Nyco won't harm babies," "Silver Key can be used for babies," "Carolene very rich and good milk," "Nyco very good milk, use for anything; good as any other evaporated milk," "Enzo, just as good as Gold Cross or any condensed milk," "Nutro and Hebe good for anything you use Pet or Star for," "Hebe and Nyco good milks," "Nyco very good evaporated milk, use for anything," "Hebe and Nyco, both are very good milks, use for everything," "Majal is good milk," "Hebe milk good as Bordens," "Highly recommend Hebe, best seller of all milks," "All the restaurants and hotels around here buy Silver Key," "Nyco is a dandy milk—good as Pet, and the same price," "Hebe good milk, good for babies; yes, good for everybody," "Enzo, not find any better milk on the market; good for babies; we recommend it," "Carolene and Silver Key good as Bordens, Hebe, or Every Day; sells largely to restaurants, but if mothers want it, I sell it."

At a recent food show demonstration for the Valecia Milk Co., manufacturers of Golden Key milk and Silver Key Compound offered three cans of milk for 25 cents. Two cans were straight milk and one can imitation milk.

Enzo has been definitely found in use in general cooking and for table use in restaurants.

Coconut oil has been definitely found in ice cream, which was purchased in Perth Amboy, N. J.

Use of Imitation Milk in the Homes

In surveys recently made it has been found that Hebe and Carolene were being fed to children whose ages ranged from babies in arms to those up to 10 years of age. It was fed them diluted with water and in coffee. In some instances these compounds were used regularly for infant feeding. In two instances children in these families were in special local nutrition clinics, because they were so greatly undernourished.

Comparative Prices

While manufacturers of imitation milks have invariably contended that their product was cheaper than the straight whole evaporated milks, surveys made prove this not to be the general condition.

In many cases these compounds are being sold at prices equal to and in quite a few instances at prices higher than those prevailing for evaporated whole milk.

Mr. Holman: The next witness is Dr. Charles L. Summers, head of the children's clinic of the University of Maryland, speaking as a representative of the university.

Statement of Dr. Charles L. Summers, Head of the Children's Clinic, University of Maryland

Doctor Summers: Mr. Chairman and gentlemen, the speaker is professor of pediatrics in the University of Maryland, pediatrician in chief of the University Hospital, and visiting pediatrician to the Robert Garrett Hospital for Children. I am also head and director of the babies' and children's clinic of the University of Maryland.

During 1911 and 1912 I did special work in Europe, and after my return continued this for a portion of each year at Johns Hopkins.

I was called to the chair of pediatrics in the University of Maryland on the death of Dr. Charles W. Mitchell, in the beginning of 1918, and have been teaching and doing clinical work in Baltimore since that time.

During the last 10 years, I have devoted my life, practically, to clinical study. I am not a laboratory man, as is Doctor McCollum, who testified before you this morning. I did not have the pleasure of hearing his testimony. However, I am familiar with his work, and am in thorough accord with his views.

I desire to approach this subject in the same way as the gentleman who has just spoken, i. e., not from its commercial standpoint. I have absolutely nothing to do with that. In fact, I am not familiar clinically with the different brands of filled milk which you are discussing here. The sale of this product, fortunately, is prohibited by law in Maryland. I know nothing about it from its effect upon the child.

I do know, however, that the use of such an unbalanced diet upon the baby is harmful. Now, gentlemen, I am speaking here for the baby, since the baby has no one to speak for it. It comes unannounced into this world, representing the only sinless state in life, for was it not our Savior who said, "Of such is the Kingdom of Heaven"? And were I sitting on this committee I would view this matter purely from the standpoint of the effect of these preparations upon the future generation of America, for there, gentlemen, is the national wealth; and to-day we men who are doing scientific work in clinics know that if you feed an unbalanced diet to a baby you develop an unhealthy man or woman, for you start these little human beings into the world with a crippled constitution. It is just like starting a young tree crooked—it stays crooked. [fol. 497] We find in our work on nutrition various deficiency diseases, the foremost of which I will mention to you is rickets. As you know, rickets is a disease known all over the world. Yet it prevails preeminently in temperate regions. In 386 consecutive post mortems on dispensary patients it has been found that 90 per cent of the babies between 2 and 4 months of age showed evidence of this disease, while 96.6 per cent between 4 and 8 months of age showed rhacitic changes. I only mention this to show you how prevalent rickets is among the poor.

Investigations in the babies' and children's clinic of the University of Maryland, which is perhaps one of if not the largest charitable institutions of its kind in this country, goes to corroborate the above. This clinic is for the poor and is absolutely free. The gentleman who preceded me spoke of the wonderful women of America, and I want to tell you that this clinic has been made possible only by the wonderful women of Baltimore. Nearly a hundred of these ladies do nursing work. They come to the clinic in sections; they do the work of trained nurses; in

fact, this great charity in Baltimore could never have been made possible without them, and we are now treating between 15,000 and 20,000 poor babies and children yearly free of charge.

The clinical manifestation of rickets is not what you would find microscopically, but we have abundant evidence of it in our work there among the poor people, due to the unbalanced diet which their babies are fed.

In the last few years, scientific investigation has demonstrated certain subsfances in food, which have not been isolated and which have no visible form. These we call vitamins. We now know that these are a necessity in food. In this disease of rickets, on account of a deficiency of calcium, the little children's bones bend, they become deformed, and as a result the child often goes through life in a crippled condition. The deposition of calcium in the bone, we have found lately, is influenced mainly by what we call the fat soluble vitamin A. We know that this exists in butter fat, and that it is a primary necessity to the babies.

Of course, mother's milk is the ideal food for the baby. We are all preaching mother's milk. Students are being taught the advantages of mother's milk. We are dwelling upon this, and instructing the students after graduation to teach this to mothers, because over three-fourths of all deaths in babies are in those artificially fed. But the mother is not always able to nurse her baby. Sometimes, the working mother has not the time nor opportunity. She has to earn her living. Fortunately, the woman who is not willing to give up her society functions in order to nurse her baby is learning better, and we meet very little of that to-day; but we constantly have cases where the mother can not nurse her baby for one reason or another, and under those conditions the child must receive artificial feeding.

Now, gentlemen, this is the point I want to make: When you have to get away from mother's milk, as we do in a great many cases, especially among the poor, cow's milk is the only substitute. It has its limitations, but by feeding what we term a balanced ration we can prevent the development of rickets and other nutritional diseases, for we now know how to use cow's milk in infant feeding.

This science of infant feeding is the newest development in medicine to-day, and more progress has been made in

this department than in any other branch of medicine since the advent of antiseptic surgery. To-day we feed a baby a balanced diet of cow's milk, embodying suitable proportions of the different food elements, and thus prevent these various nutritional diseases.

After rickets I would mention scurvy. You, perhaps, would not think that scurvy is prevalent, and yet it is, and is often seen in private practice, even among the well to do. I recently had a baby brought to my office for diagnosis by a most excellent physician. The diet in the case was not given by the physician, I wish to say. Investigation showed that the child had scurvy. Now, of course, scurvy is curable, if properly treated, but fatal if not. You must give the proper amount of cow's milk, the right amount of carbohydrates, and then give orange juice, which is rich in the antiscorbutic vitamin C.

These nutritional diseases seriously retard a baby's development, and while very frequently some other disease is shown on the death certificate, the underlying cause was bad feeding of the baby in the first year of life. I desire to make plain here the fact that pure cow's milk is absolutely essential in artificial feeding of infancy. We used to think that the milk of the goat had some advantages. We know now it had not. What we now demand is fresh cow's milk with 4 per cent butter fat. To-day we feed a balanced ration by calories, taking the weight and the tolerance of the baby as our guide, and not the age as formerly. We have made radical changes in this; we try to get the right proportion of the different food ingredients to suit each case. That is absolutely essential; and in this we can not do without the fat in cow's milk if we are to have a healthy development along physiological lines.

I have just been reading an article in the American Medical Journal of diseases of children, by Dr. L. Emmett Holt, on the fat requirement of babies, which proves this point, and I would like to read a quotation to you:

"Von Groer has observed the effects of a diet practically fat free on two infants from birth. The food given was centrifugalized cow's milk containing only not quite 1 per cent of fat, with the addition of sufficient cane sugar to raise the carbohydrate content to about 8.5 per cent of the

food mixture. This diet was not only practically devoid of fat, but also extremely low in fat-soluble vitamin and high in carbohydrate. Both the infants observed gained in weight with fair regularity for six months, one at the rate of 15 grams a day, and the other at the rate of 20 grams per day. After six months, the gain ceased and both developed rickets and were susceptible to infection throughout the period of observation."

Now, gentlemen, this is not a debatable point on the part of pediatricians. In all of our universities to-day they are in accord with what I am stating to you.

We all know that rickets develops through a lack of a suitable diet, and we know that the fat-soluble vitamin is absolutely essential in the diet if the baby is to develop along physiological lines; a food that is devoid of this, gentlemen, is not a proper food for a child.

As previously stated, I know nothing about the commercial aspect of the filled-milk question. I have never come in contact with it in my work; but if you substantiate as a fact that the babies are being fed a vegetable food, which is devoid of vitamins, with skimmed milk; if you substantiate this, you are absolutely doing the babies and children in the United States an untold harm to allow the sale of filled milk to continue.

Senator Kendrick: Your contention, Doctor, is that whether there is an adulteration or not, whether it is poisonous or not, it is an injurious substance just the same?

Doctor Summers: Yes, sir; to a baby or child, if the mother thinks she is getting milk when she is not getting milk. Gentlemen, this disease of rickets is a world-wide disease, and it is particularly prevalent in America, and it is due to bad feeding very largely. Of course, the question of sunlight enters in. We all know that these children who live in the alleys have not as good a chance as the children who live in the sunshine, and it is the child who lives in the alley, as a rule, that has rickets. That is the child you have to protect; it is the child of the poor who needs your help.

Senator Ladd: Doctor, if I understand you correctly, these filled milks are not permitted to be sold in the State of Maryland?

Doctor Summers: They are not.

Senator Ladd: They are not?

Doctor Summers: I have had no personal experience with them, I tell you frankly, but I will tell you as a scientific man that a vegetable fat is devoid of the fat soluble vitamin, and I know if a baby is placed upon such a food, that baby will of necessity develop rickets and other nutritional diseases.

Senator Ladd: The point I am trying to get at is whether or not you have a law prohibiting the sale of this product in Maryland?

Doctor Summers: Yes, sir.

Senator Ladd: If I understand you correctly, this class of filled goods would be taken care of by the enactment of a law which would prohibit their sale in the United States?

Doctor Summers: Frankly, should I, as a specialist, be called upon to give my opinion, wishing to do all I could for the human race, and knowing, as I do, that the whole future of this little innocent being depends upon what you feed it in the first year of life, I should say to you, sir, that were I to feed a baby filled milk as the sole article of diet, that child would develop both scurvy and rickets.

These two diseases are often found among the well-to-do, where a faulty diet has been fed. By way of illustration, I might mention that I was called professionally to another city in Maryland two weeks ago, where I saw 12 babies in consultation, private practice. Five of these showed evidence of rickets, and one of the number had both scurvy and rickets, its little twin brother having died a few days previous with the same symptomatology. Rickets is not a fatal disease per se. It is cured in time, but it leaves the little bowlegged folks and maimed children that you see on your streets.

Scurvy is a fatal disease, if not treated. Under such circumstances, there is but one possible termination. The child is sure to die.

In conclusion, I desire to say, gentlemen, that if these brands of filled milk are being used to-day in the feeding of babies, and that is for you to determine, such a use is criminal.

Senator McKinley: Thank you, Doctor.

Mr. Holman: The next witness is Mrs. E. P. Costigan, of Washington, D. C., representing the National League of Women Voters. She will talk to you for just a minute or two.

[fol. 498] Statement of Mrs. Edward P. Costigan, Representing the National League of Women Voters

Mrs. Costigan: Mr. Chairman and gentlemen, almost a year ago the situation in regard to filled milk was brought to the attention of the National League of Women Voters, and as chairman of the food supply and demand committee, the name of which has recently been changed to the living costs committee, I was asked to make some study of the problem, and to present it to the other members of our committee. That was done. Literature was sent to them. The reports from the House agricultural committee were distributed, and members of the committee in all States were asked to investigate the question and be prepared to act upon it when they met in our annual convention in Baltimore in April of this year.

These studies convinced the members of the league that as you have heard through the evidence here to-day—the only indispensable food for children is whole milk; that filled milk does not contain the properties that make wholesome food; that it is being sold for food for children; and that it is being used by poor and uninformed people who are least able to protect themselves.

The situation seems to be, as I have said, that filled milk is being used in places where the people, and especially the children, can not protect themselves, and that this constitutes a menace to the welfare and health of the families, and especially the children, of this country.

As a result, at the annual convention in Baltimore in April, the following resolution was adopted:

"We recommend the support of State and Federal legislation which will prohibit the manufacture and sale of filled milk."

I appear as a representative of the National League of Women Voters, to present this recommendation.

Senator McKinley: Thank you, Mrs. Costigan.

Mr. Holman: That covers all of the outside people to-day, Mr. Chairman. There are one or two others here, but perhaps we can delay that until next week. They are here particularly in connection with the constitutional argument.

Senator McKinley: We do not want to inconvenience anybody here.

Senator Ladd: Is there any one in particular who you would like to have heard to-day?

Mr. Holman: Yes; there is one other witness who will take just a minute or two.

Senator McKinley: All right.

Mr. Holman: This is Mr. E. F. McGrady, of the legislative committee of the American Federation of Labor.

Statement of Mr. E. F. McGrady, Representing the Legislative Committee of the American Federation of Labor

Mr. McGrady: Mr. Chairman and members of the committee, the American Federation of Labor has always been interested in legislation dealing with pure food, and we are vitally interested in the passage of this bill.

This milk is being sold largely to the mothers and the children of the tenement-house districts in the industrial sections of this country. We have come across it on various occasions. We know that in a great many of the industrial cities, because of the inadequate wages of the father, the mother has to go to work in the mill or factory or the shop. She can not nurse her child, and the result is that a substitute is found. And I am sorry to say that, due to poverty, due to the imposition of the man selling the goods, this mother feeds her child with the contents of some of these cans, and the result is as the doctor who just preceded me has told you.

We are watching this legislation very closely. It means a great deal to us, and it seems almost incredible to believe that a food that has been declared to be unfit for rats should be fed to human beings.

We sincerely trust that your committee will report to the larger committee favorably on this bill.

Senator McKinley: If that is all of the witnesses for to-day, we will now adjourn until the 7th of July, at 10.30 a. m.

Mr. Holman: We thank you for giving us the opportunity to have had this hearing, Mr. Chairman.

(Whereupon, at 3.45 p. m., the subcommittee adjourned until Friday, July 7, 1922, at 10.30 o'clock a. m.)

FILLED MILK

Friday, June 30, 1922

United States Senate, Subcommittee of the Committee on Agriculture and Forestry, Washington, D. C.

The subcommittee met at 10.30 o'clock a. m., pursuant to adjournment, in room 224, Senate Office Building, Senator McKinley (chairman), presiding.

Present: Senators McKinley, Ladd, and Kendrick.

(Whereupon the committee took a recess until 2 o'clock p. m. of the same day.)

After Recess

The subcommittee reassembled at 2 o'clock p. m.

Mr. J. W. Reavis: Mr. Chairman, I would like to make a preliminary statement before Doctor Gerstenberger appears. We were announced this morning as being in opposition to the bill. That is scarcely correct. The people we represent, the Babies' Dispensary and Hospital of Cleveland and the Laboratory Products Co. of Cleveland, have prepared a baby food selling under the trade name of S. M. A. which we believe is covered by the bill. We are of the belief that the proponents of the bill and the House of Representatives, when it passed it, did not intend to give the bill a wide enough scope to reach such articles, and did it solely because they did not know of this product. It is probable the bill does not cover it, and yet it is very probable that it does, in my opinion, and we are merely asking for a clarifying amendment showing that we are not included in the bill. We are not attacking the bill on the ground that we are against it, in its real substance and evident purpose.

Senator McKinley: Have you been able to formulate a clarifying amendment?

Mr. Reavis: We have been talking with Mr. Holman and his associates and thought we would talk with you after the meeting is over.

I would like to have Dr. Gerstenberger, the man who perfected the product, make some statements of what this product is.

Statement of Dr. Richard A. Bolt, of Baltimore, Md.

Senator McKinley: Will you give your name to the reporter, please?

Doctor Bolt: Dr. Richard A. Bolt, of Baltimore. I want to speak from my personal experience with the use of S. M. A. milk while I was director of the bureau of child hygiene of Cleveland, Ohio, during 1917 and 1918.

At that time we were testing out S. M. A. milk in two of our infant welfare stations, feeding it in large quantities to a considerable number of different types of infants, and it met with uniformly good results. We were able to feed successfully babies that we had had difficulty in feeding previously and we were able to prevent rickets. We had no rickets in any case I saw, and not a case of spasmophilia. The children during the summer months took S. M. A. milk very well, and we had fewer cases of gastroenteritis, or gastrointestinal diseases. From all I have seen of S. M. A. milk and from my personal experience with it I should say it is fundamentally fitted for an infant food. I have seen no deleterious results from its use. I would be glad to answer any questions of the committee, sir.

Senator Kendrick: Have you had occasion to prescribe it yourself?

Doctor Bolt: Yes, sir; at our infant-welfare centers, and at the Babies' Dispensary and Hospital of Cleveland when I was working under Doctor Gerstenberger at the time he was trying out the milk. I gave it on prescription then.

Senator Kendrick: Does it unfailingly agree with children or do you have some instances in which it is not the food they seem to require?

Doctor Bolt: In most of the cases I have treated, practically all, they have taken the S. M. A. milk easily and they have gained in weight uniformly. I gave my own children some of the milk at one time and they took it well.

[fol. 499] Mr. Balderston: Doctor, why do you refer to this as milk? I presume you are referring to S.M.A.?

Doctor Bolt: Yes, sir.

Mr. Balderston: You referred to it in every case as milk.

Doctor Bolt: It is a compound of milk which may be referred to as one of the milk preparations.

Mr. Balderston: But it is not milk?

Doctor Bolt: It is not cow's milk as it comes out of the teat, no; it is modified.

Mr. Balderston: Is it modified milk?

Doctor Bolt: Yes, sir.

Mr. Balderston: Is that generally known by physicians?

Doctor Bolt: I think those who have studied Doctor Gerstenberger's work and the announcements that have been made, look upon it as a modified milk.

Doctor Gerstenberger: It is compounded.

Mr. Balderston: We have to be careful about the terms we use.

Mr. Reavis: That is all we have to offer.

Mr. Holman: Mr. Chairman, the proponents of the bill were somewhat surprised this morning when the Chair wanted to know if there was any opposition to the bill and no one announced that they were here to take the opposite side, particularly as we understood that this particular day had been set aside to get the opposition started. We are informed that there is a representative of the Hebe Co. in the room and, for the benefit of the record, we would like to ask if it might not be possible for that gentleman to give the reasons as to why they are not ready to proceed.

Senator McKinley: We would be very glad to have the representative of the Hebe Co. make a statement.

Statement of Mr. Robert E. Kline, Jr., Washington, D. C.

Mr. Kline: Mr. Chairman, I am the quasi-representative of the Hebe Co., but am not authorized to make a statement of their side of this case. I simply am authorized to be present at this hearing and to make as many mental notes as possible of what is going on and, therefore, I do not feel that I am in a position to state their side of the case.

As I understand it, they are to have, if the opportunity is given them, a great many expert witnesses, etc., and to state the opposition to the bill as best they can, but my position is not to do that. I would not be qualified to state it if I were authorized to, and therefore, since the other side insists on my coming to the front, I simply state my position as that of being a witness at the hearing, and have nothing further to say.

Mr. Bryan: Might I ask the witness a question, Mr. Chairman?

Senator McKinley: Certainly.

Mr. Bryan: What position do you hold with the Hebe Co.?

Mr. Kline: My position is that of an attorney at law associated with Urion, Appel, and Urion. Mr. Urion represents the Hebe Co.

Mr. Bryan: You are a member of the firm?

Mr. Kline: I am associated with the firm, but am not in charge of the Hebe matters. Mr. Urion, who is in charge, is out of town, and I am here simply as a witness to the hearings.

Mr. Bryan: Was your office familar with the fact that a hearing was set last week in this matter?

Mr. Kline: I was not until about two days ago.

Mr. Bryan: Was anyone in your office aware of the fact?

Mr. Kline: No; I was the first to find out about it.

Mr. Bryan: How did you find out about it?

Mr. Kline: I was told so.

Mr. Bryan: By whom?

Mr. Kline: By Mr. Hanson.

Mr. Bryan: Who is Mr. Hanson?

Mr. Kline: Mr. Hanson, I believe, is an attorney in Washington.

Mr. Bryan: How did he come to tell you?

Mr. Kline: He called me up and told me so, knowing Mr. Urion is interested in the bill.

Mr. Bryan: Is he interested in the bill?

Mr. Kline: I do not know.

Mr. Bryan: How did he find out about it?

Mr. Kline: I do not know.

Mr. Bryan: Do you know what witnesses will be produced?

Mr. Kline: I do not, except the usual witnesses of the Hebe Co. in these matters.

Mr. Bryan: The same witnesses who have testified heretofore.

Mr. Kline: And further witnesses.

Mr. Bryan: And futher witnesses?

Mr. Kline: Yes.

Mr. Bryan: You do not know who they are?

Mr. Kline: I do not. I do not think that they have entirely been decided upon—at least, some of them have not.

Mr. Bryan: Do you not think it likely that Mr. McKee or some one knew about this hearing last week?

Mr. Kline: I do not think they did. I do not know definitely, but my opinion is they did not.

Mr. Bryan: Have you made formal application, Mr. Kline, for another hearing in this matter?

Mr. Kline: I have not personally made formal application for another hearing in this matter.

Mr. Bryan: Has anyone?

Mr. Kline: I believe it has been made.

Mr. Bryan: By whom?

Mr. Kline: I do not know.

Mr. Balderston: For what date?

Mr. Kline: Possibly the chairman of the committee will know about that.

Mr. Holman: Mr. Chairman, I desire to call attention to the first nine pages of the record of the House hearing on Monday, June 13, 1921, in which similar tactics of delay were attempted unsuccessfully by the representatives of the filled milk organizations, notably the Hebe Co. The records at that time showed that notice had gone out one week in advance, just as they went out presumably, in this case. We were on hand and we asked the hearings to be continued. The gentlemen present questioned and asked for delay and brought up the fact that they wished to bring expert witnesses who could not be produced at that time, and the committee, after considering the matter, decided to go ahead with the hearing, and we, as the proponents of the bill protest against any further delay in the finishing and carrying out of these hearings. We would like for the committee, if it is possible, to expedite these hearings as much as possible in view of the legislative situation existing at the present time.

Senator McKinley: I might say that under the present "political situation," as you suggest, the tariff bill has the right of way. The guesses are that it may pass by the 1st of October. Nothing can come in except by unanimous consent ahead of the tariff bill. I think it is the general consensus of opinion that if anything at all does come up it will be the bonus bill, and I think from the standpoint of this committee that the next matter that would come up from this committee would be the Capper-Tincher bill and probably, from the amount of interest that is felt, the next thing that would come up after that would be the Muscle Shoals matter. So that while ordinarily I would not for one minute stand for a postponement for three weeks, as is asked,

under the circumstances I can see where there would be no harm done or delay caused by postponing the hearing until the 1st of August, taking everything into consideration. Of course, this filled milk bill is new to the Senators.

Mr. Holman: It is an old matter to the proponents and the opponents.

Senator McKinley: So I see. And the statement that was made to me was that three experts whom the Hebe people wanted to put on were college men who were on their vacations—possibly not all of them on their vacations, but that they could not get hold of them until the 1st of August, and repeating that there is not any possible chance of any consideration of the bill for 30 days or more, I can not see how there is any harm done. Personally I want to be fair to everybody. I personally think I am rather convinced now, but then it is only fair to the other side that they be heard.

Mr. Holman: Would you mind, Senator, giving us the names of the three witnesses?

Senator McKinley: I do not know them.

Mr. Holman: They referred at that time to Doctor Mendell, of Yale, and the House Committee on Agriculture especially invited Doctor Mendell to appear, but it appeared he also was on his vacation at that time and could not come. That is one reason we question this attempt to delay.

Senator McKinley: That was in last June?

Mr. Holman: Yes; that was in June. Apparently the doctor takes a very long vacation.

Senator McKinley: He goes in June, probably and comes back the 1st of August. I guess that is customary with many college professors. The college usually closes about the 1st of June.

Mr. Holman: Mr. Chairman, under the circumstances we would like to put two or three witnesses on for a short time and reserve one or two until after the opposition has been put on.

[fol. 500] Senator McKinley: Any way that you want to arrange it.

Mr. Holman: But we do feel that such delay on the part of the opposition is unwarranted and inexcusable. We happen to know they are just as well prepared at the present time as they will be 30 days from now.

This whole matter was gone into before the Supreme Court of the State of Wisconsin with the Hebe Co., partici-

pating, and they have all their witnesses, and they have all of their material. Even later than that date we have met Mr. Paul McKee, their attorney and secretary, at Richmond and at Trenton and later than that even at Albany. Both at Trenton and at Albany the State legislatures by overwhelming votes banned this product; and in Baltimore, in a later case I am informed, the same thing occurred. We can not understand why they do not bring their witnesses to-day.

Senator Kendrick: I would like to say that the way I feel about the bill I am ready to vote on if now. Just as the witness has said, they are ready to offer their last witnesses and finish with their testimony, but we have made it an unfailing rule here to leave no doubt in every case where I have ever had to do with legislation, that both sides have had a full hearing, and it seems to me these people might be required to bring their witnesses on now or forego the opportunity, were it not for the fact that, as Senator McKinley has pointed out, there does not seem to be any way to promote action on the bill further than for this committee by hurrying the bill into the Senate before the 1st of August. There will not be one moment given to the consideration of this bill between now and the 1st of August, and it seems to me if these people require that time it should be granted to them, but we should say to them that on the 1st of August they must be here with their witnesses because we are going to hear the last testimony and report the bill immediately to the Senate for or against it.

Senator McKinley: I want to repeat that the way I feel about it is that if Congress was in session right along now I would not stand for that delay at all.

Mr. Holman: With your permission, if the committee will rule then that August 1 will be positively the last day that the opposition will be allowed to produce their witnesses, we are willing to go ahead—with such necessary adjournment, of course.

Senator McKinley: The last day to produce witnesses, yes.

Mr. Holman: In other words, the hearing goes on on August 1, whether they are here or not?

Senator Kendrick: That is my view of it. Then they will have their request conceded and they will have their opportunity, and the responsibility is with them. The committee will not wait but will act promptly when that is

don,e, and if we decide it shall be taken up at that time and disposed of without delay we will then, as our chairman has suggested, probably be well within the time that the bill would receive consideration in the senate.

Mr. Holman: And they will be notified to that effect?

Senator McKinley: Oh, yes.

Mr. Holman: Dr. I. C. Atkeson is our next witness. He is the Washington representative of the National Grange.

Statement of Mr. Thomas C. Atkeson, Washington, D. C.; Representing the National Grange.

Mr. Atkeson: Mr. Chairman, the organization I have the honor to represent here in Washington is an organization of farmers that is pretty thoroughly organized in 33 States of the Union, reaching from Maine to California and in all of the States except a few of the more Southern cotton-growing States. It is not a dairy organization nor a dairymen's organization. Its membership is made up of men who are engaged in dairying, cattle growing, sheep growing—every department of agriculture. So as an organization we have no special or class interest in the pending question.

The bill as it passed the House is the matter now under consideration by this sub-committee; but for a great many years; dating back nearly a half century, our organization has annually gone on record in one form or another in opposition to every character of fraud and deception and method in commerce and trade and traffic that is calculated to impose upon or mislead the unprotected individual.

Dealing with the specific question, at the annual session at Portland, Oreg., last November, the National Grange adopted this resolution:

"The grange is opposed to the manufacture and sale of filled milk, a business which takes the butter fat out of the milk and substitutes a vegetable fat lacking in vitamines; fraud upon producer and consumer alike."

Now, it is only a question of broad public policy that our organization has acted upon when it declared in opposition to the manufacture and sale of the commodity which we consider is a fraud upon the helpless individual who buys it. And perhaps this fraud would not be so flagrant if it dealt only with the adult, even if it were guaranteed by

some means that every individual adult purchaser of this so called filled milk knew that he was buying filled milk and had an opportunity of knowing its worth and its lack of worth as a food element, it would perhaps not be so fraudulent or so indefensible as the fact that the ignorant parent may take this fraudulent commodity and inflict it upon the helpless infants. And that is the crux of the argument in favor of the absolute prohibition of the manufacture and sale of the commodity of which the experts have told your committee and with which I have some acquaintance, that this commodity lacks in some of the essential nutrients necessary to the proper development, especially of the young and growing child or animal, for that matter.

It seems to me that the argument against this deception or fraudulent substitution of a commodity for the one commodity that the world has always recognized as the food of growing animals and growing children, milk, is that there is no possible way to adequately protect this helpless infant except by prohibition of the manufacture and sale of this commodity.

I do not care to discuss the question technically. I think Doctor McCollum and some others have discussed it until, perhaps you gentlemen are tired of it.

Senator McKinley: Doctor McCollum made a very impressive statement, as far as that is concerned.

Mr. Atkeson: So, if I were to discuss it, it would be largely a repetition. I sought this opportunity to come before the committee primarily for the purpose of placing in the record the position taken by this organization of a large number of farmer people who, while some one might charge a dairyman's organization with having the class or commodity interest in this problem, I maintain that our organization has no interest in it except the broad problem of public welfare as well as the humanitarian problem, and I wanted to put that statement of this organization in the record.

Now, we did not declare for the Voigt bill, but we did declare against the manufacture and sale of filled milk; that is this filled milk which is a fraudulent substitute.

Senator McKinley: What is fraudulent, Doctor?

Mr. Atkeson: Well, anything is fraudulent, Senator. I am not surprised that you ask that question—anything is fraudulent that the individual purchaser or consumer can not determine from looking at the thing or tasting of it or

smelling of it, or by any of his five senses determine what it is, and if he buys something that looks like and tastes like and smells like and feels like, and, if it made a noise, would make a noise like milk, and yet is not milk; it is fraudulent.

Senator McKinley: I am glad to have your definition of fraudulent.

Mr. Atkeson: That is what is the matter with this so-called filled milk. Now it is said by legislative declaration that it is deleterious. Some one will want me to define "deleterious" perhaps. I do not think the legislative declaration settles the question whether or not it is deleterious. It certainly lacks in some of the essential nutritive food elements contained in unadulterated, or unmixed, or pure milk, and to that extent it is certainly fraudulent according to my definition. Therefore, we are opposed to the manufacture and sale of this commodity known as filled milk, and without undertaking to be expert in law writing or in meeting the requirements of the courts, the Voigt bill is the problem now pending, which prohibits the manufacture and sale of this commodity, therefore I reach the conclusion, individually and for our organization, that we are in favor of the adoption of the Voigt bill. If you can make it any better that it is, why all right.

Senator McKinley: Thank you.

Mr. Holman: Mr. Edwy B. Reid, representing the American Farm Bureau Federation, is the next witness.

Statement of Mr. Edwy B. Reid, Representing the American Farm Bureau Federation.

Mr. Reid: The bill under consideration has been passed by the House and is now before this subcommittee. I do not suppose it is necessary for the Federation to go into the matter again, since testimony of rather a voluminous character is found in the report of the hearing before the House committee.

Senator McKinley: I think it will have the full effect if you say that the American Farm Bureau is against it.

Mr. Reid: Well, I am about to say that; that it is for the Voigt anti-filled milk bill.

You know the character of the American Farm Bureau Federation; that the Illinois Agricultural Association of your State is one of the units, and that it has units in practically every State in the Union.

The American Farm Bureau Federation has given serious thought to this, a great deal has been written and said concerning the bill and I think the farmers are very well [fol. 501] informed regarding it. In fact, the American Farm Bureau Federation at its annual meeting November 23, 1921, at Atlanta, passed the following resolution:

"In order to prevent filled milk or modified milk products from destroying the American dairy industry and injuring the health of the consuming public, we insist that the manufacture and sale of filled dairy products be forbidden."

That comes within the wording of the Voigt bill.

Mr. Holman: Mr. C. A. Lyman, secretary of the National Board of Farm Organizations.

Statement of Mr. C. A. Lyman, Secretary of the National Board of Farm Organizations

Mr. Lyman: Mr. Chairman, the National Board of Farm Organizations has considered this matter of filled-milk legislation very carefully. We have had the advantage of having the National Milk Producers' Federation give us full particulars of the extent of the practice of using and selling filled-milk products.

The National Milk Producers' Federation is a member of our board, and we have considered this matter in formal session. I have with me a statement or resolution which we adopted, which I would like to read.

The National Board of Farm Organizations meeting at its home at 1731 I Street NW., Washington, D. C., October 31-November 2, adopted the following report on proposed filled-milk legislation:

"A serious condition menaces the dairy world. A counterfeit product has appeared on the markets, made in imitation of evaporated milk and other milk products. These products are being sold as substitutes for genuine milk products. In many proven instances evaporated compounds have been sold as milk by merchants, although branded various names, such as Hebe, Carolene, Enzo, Silver Key, Nutro, and Nyko. These compounds are made by extraction of butter fat from whole milk and substituting therefor approximately an equal quantity of coconut oil imported from the Orient. This oil can be had ordinarily at one-fourth the price of butter fat. In 1920 nearly 8,000,000

pounds of coconut oil were used in the making of 84,044,000 pounds of these compounds. This practice constitutes a serious economic menace to the dairy industry. Dairy farmers can not hope to compete with the coolie-grown coconut tree.

"Scientists of international renown such as Dr. E. V. McCollum of Johns Hopkins University and Prof. E. H. Hart, of the University of Wisconsin, have through their studies demonstrated that coconut oil does not contain vitamines so essential to animal growth. Doctor McCollum stated before the House Committee on Agriculture that the feeding of these imitation milks to children in place of a milk diet would in three or four months produce rickets. A great increase in the consumption of these compounds would therefore produce a serious nutrition problem for the American people since the product is defective.

"The bogus milk industry is in its infancy. Now is the time for American people to determine whether they will permit this counterfeit to rob them of vitality in order to profit a few individuals.

"We denounce the traffic as a form of commercial immorality. We urge that Congress and the various State governments exterminate this traffic. We indorse prohibitory State measures such as passed the legislature of Wisconsin this year, and we unqualifiedly indorse the Voigt bill, H. R. 8086, which seeks to prohibit the movement of this product in interstate commerce. This bill has been favorably reported by the House Committee on Agriculture by a vote of 14 to 4. We urge the passage of this bill by Congress and we call upon the publishers throughout the United States to refuse bogus milk advertisements and to lend their aid in stamping out this insidious traffic which threatens to undermine the public health. Especially do we urge the consumers organizations of the United States such as the General Federation of Women's Clubs, the National League of Women Voters and the Consumers' League to join us in this fight.

"We also warn consumers of the new compound which uses coconut oil in ice cream mixtures. We urge Federal and State legislation to prohibit its use in this connection."

C. S. Barrett, chairman of our board and president of the National Farmers' Union, wanted me to say to the

committee to-day that he would like to have me speak in behalf of his organization.

You will recall at the hearing last week a representative of the National Farmers' Union appeared and made a very strong plea in behalf of the Voigt filled milk bill. That was Mr. John Tromble, president of the Kansas Farmers' Union. Mr. Barrett to-day said again he would like to have me call the committee's attention to the fact that the National Farmers' Union was strongly in favor of this bill.

Mr. Holman: Mr. A. M. Loomis, secretary of the National Dairy Union.

Statement of Mr. A. M. Loomis, Secretary of the National Dairy Union

Mr. Loomis: Mr. Chairman, my name is A. M. Loomis, 630 Louisiana Avenue, Washington, D. C., appearing as secretary of the National Dairy Union.

The National Dairy Union, Mr. Chairman, is an organization representing generally the creameries of the United States, chartered in your State and incorporated there in 1903.

The National Dairy Union has had a long and active career in contesting the right of selfish interests to manufacture products and sell them in imitation and semblance of dairy products in the United States, dating back to the early fight against the encroachment upon the dairy industry and upon the public welfare and public health, as we view it, by the manufacturers of oleomargarine, and recently, within the last two or three years, having taken up this same situation in opposition to the filled milk industry.

We believe that the dairy products have a particular place in the welfare and the nutrition of the human race, and that the dairy industry has a particular and valuable and important place in the agriculture of the United States, and that because of both of these facts this industry is entitled to receive some special consideration; and, further, that in this case, as in the oleomargarine case, there was an insidious attack upon the public health and a fraud, as Doctor Atkeson has defined it, upon the public in the manufacture and sale of these products.

I will read for the record the resolution which the National Dairy Union has adopted. [Reading:]

"Whereas, the practice of compounding comparatively cheap vegetable fats with dairy products for the purpose of

selling these cheap fats to the public in place of butter fat, has recently taken on new life, in the so-called filled milk industry; and

"Whereas, filled milk has now grown to the point where it is as dangerous to the welfare of the dairy farmers and the dairy industry as oleomargarine; and

"Whereas, both oleomargarine and filled milk are dangerous frauds on the public in that both are efforts to disguise a cheap and inferior imitation of butter fat as butter fat so it can be sold in place of butter fat at or near butter fat prices, and such fraud on the public deserves strong condemnation and every possible legal control and restraint. Therefore, be it

"*Resolved*, that the National Dairy Union asks Congress for legislation which will protect the public and the dairy farmer from the fraudulent manufacture and sale of filled milk."

The National Dairy Union participated in a conference of all the dairy interests of the United States, held at Buffalo, N. Y., on July 8 and 9, 1921, at which a resolution was adopted asking for legislation on filled milk of which the following is an abstract:

"Whereas, there is an alarming increase in the manufacture, sale and consumption of bogus milk products, consisting of compounds of skimmed milk and coconut oil or other vegetable fats, and

"Whereas, such products, regardless of the labels on the containers, are being sold in large quantities as condensed milk and other milk products, thereby at once becoming a fraud on the consuming public as well as a menace to the public health and to the dairy interest: Therefore be it

"*Resolved*, That we favor the abolition of such traffic by Congress by direct prohibitory or restraining laws."

The active work of the National Dairy Union on this proposition started in July of last year, when, at a meeting in conjunction with all the other agricultural and dairy organizations, it went on record in favor of a bill to prohibit the manufacture and sale of filled milk, and later on, at the organization meeting in January of this year it renewed its activity on this subject.

I should say that the creamery industry in the United States numbers some 6,000 of 7,000 individuals, corporations, or business enterprises in practically every State in

the United States, and there is now an actual working, contributing membership in the National Dairy Union which represents the creamery interests of most of the States in the United States.

Now, I want to emphasize one or two more things, in this connection. In my brief I am discussing the question of fraud and resting our indorsement of this bill chiefly on the question of fraud, but there are two other factors that require to be recognized. One is that the dairy industry is essential to the well-being of the people of the Nation and that any attack upon this industry, especially if made under the fraudulent conditions which are shown to surround the filled milk industry should be taken into account by Congress and limited, restricted, or prohibited, so far as possible.

[fol. 502] The live stock industry, not alone the dairy industry, is basic in its importance in agriculture as the only agricultural industry which provides for a complete replenishment of soil fertility, and the perpetuation of agriculture, and only on that basis can the agriculture of this country, as we see it, be maintained in the future. That establishes the particular reason why any attack, and particularly an attack based upon fraudulent practice, upon the dairy interest, comes well within the cognizance of Congress.

The second is the fact that the dairy industry has shown its ability in the past to fully provide for the requirements of the people. It has shown its ability not only to provide all the dairy supplies that the people of the United States need, but during the period of the past year or year and a half, during the depressed times in the beef industry, it has shown it has a capacity to take care of a large surplus out of the beef industry, and the statistics of the United States Department of Agriculture show that hundreds of thousands, if not a million animals, which would have gone to the butcher and further depressed the price of beef were turned into dairy production, and because of the high repute of dairy products with the public these dairy products were absorbed and taken care of, and all without any serious effect on the dairy industry.

There is a go and come between the beef and dairy industry that makes the dairy industry of special importance to all agriculture.

The other argument upon which I base the opposition of the dairy union to the filled-milk industry and the indorsement of the Voigt bill is the argument of its insidious attack upon public health, feeling that Congress is well within its powers in preventing fraud, in protecting the public health, in protecting the live-stock industry, and in protecting the dairy industry especially.

I would like to file this brief for the record.

(The brief referred to is as follows:)

Brief Filed by A. M. Loomis, Secretary of the National Dairy Union, in Support of the Voigt Bill, H. R. 8088, with the Senate Committee on Agriculture and Forestry, July 7, 1922.

The National Dairy Union is an organization of the allied dairy interests of the United States, formed and incorporated under the laws of the State of Illinois in 1903. Its original and its present purpose as stated in the articles of incorporation is: "To protect the dairy industry from the fraudulent sale of any substitute for the product of the dairy; to protect the interests of the consumers of dairy products; to disseminate dairy knowledge and in every way further the interests of dairymen and others engaged in the handling of dairy products."

The attention of the National Dairy Union has been directed toward that particular form of substitution for dairy products known as filled milk since this imitation dairy product first appeared upon the market.

Fraud upon the public arguments.—The National Dairy Union opposes the fraudulent sale of any substitutes for the products of the dairy, because frauds of all kinds should and do merit the opposition of all honest people.

Substitution is of itself a fraud upon the purchaser and merits and should have the condemnation of all honest people. Imitations of dairy products do not have the same food value as the dairy products themselves, no matter how close the imitation may be, and the closer the imitation, the larger the element of fraud becomes and the more important the necessity for public protection by legislation.

This argument against fraud and against substitution applies to all food products, but especially to the dairy products, because of the recent scientific demonstration by Doctors McCollum, Hart, Mendel, and others, of the pres-

ence in dairy products of the essential and necessary vital elements more readily accessible to all food consumers than in any other food product.

The National Dairy Union is willing to rest its case in favor of this legislation upon the single argument of fraud.

The evidence before the committee shows that the substance known as filled milk is made in the closest possible resemblance to evaporated whole milk, so that the purchasers are unable to tell the difference and protect themselves against the fraud. Evidence shows that it is frequently served in hotels and boarding houses and that there is an increasing production for sale in bulk which implies its use in baked goods, ice creams, confections, and other products in which the absence of the whole milk can not be detected excepting by highly technical scientific analysis.

The product is marketed for the retail trade in containers of the exact size and shape of the containers used for the marketing of the whole milk product. Evidence discloses that wholesalers and retailers are urged by the manufacturers to intermingle this product with the whole milk for the evident purpose of basing their sales upon the fraudulent imitation.

Evidence before the committee discloses that the manufacturers use labels which in every particular excepting the words used are evident and close imitations of the labels used upon the recognized whole milk products.

Public health arguments.—Supplementing the argument of fraud upon which the National Dairy Union has rested its case against all substitutes for dairy products, there is now ample evidence upon which to base an argument for the protection of public health.

When the National Dairy Union made its original and successful fight for the proper safeguarding of the public against the fraudulent sale of another imitation dairy product—oleomargarine—it could produce no scientific evidence of the presence in dairy products of essential food factors and the absence of such essential food factors in the imitation products. Experienced men, painstaking students of the science of nutrition, doctors, nurses, college professors, and others knew that certain phenomena connected with health, strength, and longevity followed proper diet in which milk and milk products were freely used, and that the experience of the Aryan race in its development of the highest

type of civilization was based upon a diet in which dairy products played a prominent part, but the scientific information which has since been made available by the researches of such eminent specialists as Dr. E. V. McCollum, who appeared before the committee, and others whose work has become standard and authoritative, are now for the first time before this committee, and these men have shown, and the evidence of the physicians who have been called have corroborated, the fact that certain vital elements in foods absolutely necessary for the well-being of children, especially infants, and essential to proper health and strength of adults, are found in whole milk and its products, especially the milk fat, and that the use of filled milk or imitation milk from which the milk fat has been extracted becomes a menace to health and attack upon child welfare and a matter well within the powers of Congress to prohibit under the public welfare clause of the Constitution, not because of what the product is or contains, but because of what it is not and does not contain, and the fact that its use in so far as it is used takes the place of and excludes from the diet the real milk and the real milk fat which are essential.

The establishment of the argument that filled milk is deleterious rests upon the fact that filled milk is made and sold for the deliberate and even fraudulent purpose of replacing whole milk in the diet, and otherwise would have no market or sale, and that when it replaces whole milk in the diet it robs the consumer in large measure without his knowledge or consent of the vital elements which are supplied chiefly, economically, and in many diets only by whole milk and its products.

Attack upon the dairy industry.—There are two other controlling arguments for the Voigt bill which should be urged. One is that the dairy industry is essential to the well-being of the people of the Nation and that any attack upon this industry, especially if made under the fraudulent conditions which are shown to surround the filled-milk industry, should be taken into account by Congress and limited, restricted, or prohibited, so far as possible.

Dairy industry essential to agriculture.—The live-stock industry, not alone the dairy industry, is basic in its importance in agriculture as the only agricultural industry which provides for a complete replenishment of soil fertility

and the perpetuation of agriculture, and as such is entitled to the same protection.

The National Dairy Union is officially on record for legislation on this subject by virtue of the following resolution adopted at a meeting held in Chicago on January 6, 1922:

"Whereas the practice of compounding comparatively cheap vegetable fats with dairy products for the purpose of selling these cheap fats to the public in place of butter fat has recently taken on new life in the so-called filled-milk industry; and

"Whereas filled milk has now grown to the point where it is as dangerous to the welfare of the dairy farmers and the dairy industry as oleomargarine; and

"Whereas both oleomargarine and filled milk are dangerous frauds on the public, in that both are efforts to disguise a cheap and inferior imitation of butter fat as butter fat so it can be sold in place of butter fat at or near butter-fat prices, and such fraud on the public deserves strong condemnation and every possible legal control and restraint: Therefore be it

"*Resolved*, That the National Dairy Union asks Congress for legislation which will protect the public and the dairy farmer from the fraudulent manufacture and sale of filled milk."

The National Dairy Union participated in a conference of all the dairy interests of the United States, held at Buffalo, N. Y., on July 8 and 9, 1921, at which a resolution was adopted asking for legislation on filled milk of which the following is an abstract:

[fol. 503] Whereas there is an alarming increase in the manufacture, sale, and consumption of bogus milk products, consisting of compounds of skimmed milk and coconut oil or other vegetable fats, and

"Whereas such products, regardless of the labels on the containers, are being sold in large quantities as condensed milk and other milk products, thereby at once becoming a fraud on the consuming public as well as a menace to the public health and to the dairy interests: Therefore be it

"*Resolved*, That we favor the abolition of such traffic by Congress by direct prohibitory or restraining laws."

The National Dairy Union filed a brief in support of filled-milk legislation with the House of Representatives when

this subject was under consideration in 1921, of which the following is an abstract:

"In asking the Congress to enact laws against this product I would urge consideration of the following facts:

"I. The sale of this product, which is not milk, in place of milk is seriously injurious to the dairy industry, which is necessary for a prosperous, permanent agriculture.

"II. The sale of this product, which is not milk, in place of milk is injurious to public health.

"III. The sale of this product, which is not milk, in place of milk is a fraud on the public.

"*The argument of fraud.*—The representatives of the dairy industry will show that this imitation product—this traffic in 'filled milk'—is fraudulent, because—

"(*a*) The product is not milk. It has had the most valuable and most expensive food element—butter fat—removed, taking with it 90 per cent of the vitamine content, and the fat which is substituted does not contain this vital element in essential amount.

"(*b*) It is made up to look, taste, and test like milk. It has the same color, flavor, and specific gravity.

"(*c*) It is put into the same kind of containers as were used generally for condensed milk. Even the labels used in almost every instance are made in close similiarity to labels used on condensed milk.

"(*d*) It is offered to dealers at a considerably lower price than condensed milk. The dealers can make a larger margin by selling the compound.

"(*e*) It is advertised and sold as milk. Surveys have shown daily paper advertisements calling this product 'milk' and salesmen who tell customers it is milk or 'better than' condensed milk. (Ref.: House Committee on Agrisulture hearings, H. R. 6215.)

"These facts prove the fundamentally fraudulent charter of the product, and prove that by reason of the substitution of a cheaper substance for an expensive and more necessary one, the manufacturers are parties to the fraud, by being the originators of the intrigue which leads to its final sale as and for milk.

"*Public Health.*—The sale of this product is injurious to public health.

"Compound milk contains vitamines only in limited quantity. (Ref.: Statements Professors McCollum, Hart, and Mendel, House Committee on Agriculture hearings on H. R. 6215.)

"Vitamine fat soluble A is removed to the extent of 90 per cent when butter fat is taken out of whole milk. (Ref.: Statements Professors McCollum, Hart, and Mendel, House Committee on Agriculture, hearings on H. R. 6215.)

"Practically no vitamine is added when vegetable oils are added. (Ref.: Statements Professors McCollum, Hart, and Mendel, House Committee on Agriculture hearings on H. R. 6215.)

"Vitamine water soluble B, in which fluid milk is very rich, is killed by the condensing process by which milk compounds are made.

"In the average diet of the American people, milk is essential as a source of vitamines. Any substitute for milk, deficient in vitamines, is dangerous in the diet of children, and likely to weaken adult strength and resistance to premature senility (See testimony of Doctor McCollum, House Committee on Agriculture, H. R. 6215.)

"Deficiency of vitamines is a cause of pellagra. (See testimony of Doctor McCollum, House Committee on Agriculture, H. R. 6215.)

"Deficiency of vitamines is a cause of rickets. (See testimony of Doctor McCollum, House Committee on Agriculture, H. R. 6215.)

"It is not claimed that compound or "filled milk" is per se a deleterious food. Oleo oil is a pure food; skimmed milk is a pure food; vegetable oil is a pure food. The attack on public health is revealed only when these substances, each deficient in an essential, health-giving and health-protecting element, to wit, fat soluble A vitamine, are put together in a product which has the semblance of and is so sold, to replace, take the place of, and lead people to buy in place of another product, to wit, whole milk. The essential element of fraud and the essential attack on public health are so closely interwoven that they can not be separated.

"*Injurious to dairy industry.*—We believe that every pound of filled milk sold takes the place of a pound of whole milk.

"There were made in 1920 a total of 85,000,000 pounds of filled milk.

"From the skimmed milk of which this was made, about 7,000,000 pounds of butter fat were removed and put on the market as cream or butter in competition with the legitimate trade in cream and butter.

"To this skimmed milk was added about 7,000,000 pounds of coconut or other cheap vegetable oil.

"This oil cost between 7½ and 12½ cents a pound.

"The manufacturers were thus enable to undersell legitimate butter and legitimate milk, having the benefit of a difference in cost of 7,000,000 pounds of butter fat, worth approximately 40 cents a pound, and the vegetable fat they purchased worth approximately 10 cents a pound.

"The dairy industry can not survive this competition.

"Butter fat can not be produced at 10 cents a pound.

"Dairying is an essential industry; essential to public health and essential to permanent agriculture.

"The vegetable oils used in this fraudulent competition are of foreign production. No American industry will be harmed by this proposed law.

"*Relative public interest.*—There are upwards of 23,000,000 dairy cows in the United States. The industry produces 89,500,000,000 pounds of milk, 863,000,000 pounds of creamery butter, and 676,000,000 pounds of farm butter, 362,000,000 pounds of cheese and 1,500,000,000 pounds of condensed milk, along with over 260,000,000 gallons ice cream.—Department of Markets.

"Seven thousand eight hundred and fifty seven establishments are engaged in manufacturing dairy products, with products valued at over $1,000,000,000. One-half of this is the butter business of the country, or over $500,000,000.

"More than $300,000,000 worth of condensed and powdered whole milk, made wholly from the milk produced on American farms, is depreciated in value in every market by this bogus-filled milk.

"Dairy cattle are reported on 4,569,866 of the 6,448,366 farms reported in the 1920 census and the estimate of the capital invested in the farm property alone engaged in the milk industry is $55,000,000,000.

"Appearing against this are the representatives of a few concerns which import coconut meat and coconut oil, a few industries which make filled milk, and of an advertising agency that advertises it and the grocers who sell it."

Respectfully submitted. National Dairy Union, by
A. M. Loomis, Secretary.

Mr. Holman: One witness from Iowa, Mr. W. A. Wentworth, secretary of the Iowa Creamery Secretaries and Managers' Association could not be present, but asked me to file with the committee this very brief statement as a part of the record.

Senator McKinley: He gives his title there, does he?

Mr. Holman: Yes, sir. Mr. Wentworth is also secretary of the Iowa Dairy Council.

(The letter referred to is as follows:)

Iowa Creamery Secretaries' and Managers' Association

Des Moines, Iowa, June 26, 1922.

Chas. W. Holman,
Washington, D. C.

DEAR MR. HOLMAN: I understand that a subcommittee from the Senate Committee on Agriculture is to hold a hearing the latter part of this week in connection with the Voigt bill, which bill is for the purpose of restraining interstate shipment of a milk product commonly termed "filled milk." We know that in the other seasons of production in Iowa there is a very large amount of this product sold to a public which does not understand or realize the differences between a milk product which contains butter fat and one which does not. I have noted on many occasions advertisements carried in daily papers with such brands as Silver Key, Enzo, and Hebe, listed as condensed milk, along with such recognized products as Carnation, Eagle Brand, etc. These advertisements appeared as being carried by local grocerymen, and have tended to create in the minds of the public a thought that there is no particular difference between the two. Whereas we do not have at hand at the present time evidences of the advertising or sale of this product, we would not only be willing to make affidavit, but could secure dozens of other Iowa people to do likewise, evidencing the fact [fol. 504] that this trade practice is conducted in seasons of the year when production is lighter than now or prices somewhat higher.

With the recognized difference that exists in the food value of these products, and the misleading advertising and salesmanship practiced, we would urge that the Senate of the United States concur in the action of the House in order that

this product may be effectively controlled. I trust that you can impress upon the subcommittee holding this hearing that conditions in Iowa, in so far as the sale of this product is concerned, are very similar to other points where evidence has been gathered, and that its sale is just as detrimental in this State as anywhere else.

Yours very truly, W. A. Wentworth, Secretary.

Mr. Holman: We are willing to rest temporarily, with the thought that there are one or two other men who will be brought in following the resumption of the hearings on August 1. I have also been asked to inquire if it would be possible for the transcript of these hearings to be printed in advance of the second hearing on August 1.

Senator McKinley: You keep in touch with Mrs. Talbert, the secretary of the committee, and she will do that.

Mr. Holman: We spoke to her a day or two ago, and she intimated that it would have to come as a decision from you.

Senator McKinley: Well, I will make it, but she will carry it out.

Mr. Holman: Of course, we have the privilege of rebuttal?

Senator McKinley: Oh, yes. Let these telegrams be placed in the record.

(The telegrams referred to are here printed in full as follows):

Chautauqua, N. Y., July 1, 1922.

Senator Wm. McKinley,
Senate Chamber, Washington, D. C.:

The manufacture of milk compounds assures the conservation for human consumption of millions of pounds of skimmed milk used for feeding animals or thrown away. Adroit appeals to the mother love of women in an effort to secure their support of the Voigt bill should be discountenanced.

Kate Wood Ray,
Chicago, Member Women's Allied Drug Club.

Chautauqua, N. Y., June 30, 1922—5.20 p. m.

Senator McKinley,
Senate Chamber, Washington, D. C.:

The trade war against skim milk compounds has been carried into Congress. I object to such legislation as will permit our Representatives at Washington to be used in furthering such a war, therefore I ask that you use your influence to defeat the Voigt bill.

Mrs. John Milloy,
Elmhurst, Ill.

Chautauqua, N. Y., June 30, 1922—8.23 p. m.

Senator Wm. McKinley,
Senate Chamber, Washington, D. C.:

The Voigt bill is an unwarranted interference with business, and if enacted into law would deprive hundreds of thousands of families of a nutritious, wholesome, and economical food product.

Grace Viall Gray,
President University of Chicago Cooperative Nursery.

Chautauqua, N. Y., June 30, 1922.

Senator McKinley,
Senate Chamber, Washington, D. C.:

As a home economic teacher I am opposed to the Voigt bill. A vote for the Voigt bill is a vote against the home. It would drive from the market a wholesome and nutritious food and deprive housewives of an excellent cooking medium.

Rhoda Viall, Manteno, Ill.

Chautauqua, N. Y., June 30, 1922.

Senator McKinley,
Senate Chamber, Washington, D. C.:

Bakers and candy makers can buy skimmed milk, so why deprive the housewife of the use of this economical and valuable food? Skimmed milk with vegetable fat has the approval of health authorities. The Voigt bill would legislate these preparations off the markets. Defeat the Voigt bill.

Mrs. Olto Heper, Elmhurst, Ill.

Chautauqua, N. Y., June 30, 1922.

Senator McKinley,
Senate Chamber, Washington, D. C.:

I am opposed to the Voigt bill, because I believe it to be a trick to eliminate competition. Scientific and medical men of highest repute have stated such foods to be wholesome and nutritious and an important addition to the food supply of the United States. Housewives are vitally interested in any wholesome food product that tend to lower the cost of living. As my Representative I urge you to defeat the Voigt bill.

Marion H. Biel,
Legislative Chairman Chicago Federation Woman's Club.

Chicago, Ill., July 3, 1922.

Hon. Wm. McKinley, Senate Chamber, Washington, D. C.:

After a meeting here to-day in which the Voigt bill was discussed I am convinced that this legislation is inspired by wholly selfish motives and should not be permitted to become a law. As my Senator I urge you to use your influence for its defeat.

Mrs. Theresa Burchy, Chicago.

Chautauqua, N. Y., July 1, 1922.

Senator McKinley, Senate Chamber, Washington, D. C.:

With the trade war so plainly evident behind the Voigt bill, public health has nothing to do, but when they use public health as a smoke screen it should be repudiated. An edible fat added to skimmed milk and properly labeled is an economical addition to our food supply and not deleterious to health.

Eva M. Wilson, Chairman Public Health Illinois Federation of Women's Clubs.

Chicago, Ill., July 3, 1922.

Hon. Wm. McKinley, Senate Chamber, Washington, D. C.:

Knowing your desire in legislative matters to get the angle of the people back home, I wish to enter my protest against the passage of the Voigt bill. Economy in the household demands a place on the market for the milk compounds.

Mrs. Blanch R. Taves, Chicago, Ill.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

The passage of the Voigt bill would establish a far-reaching and insidious precedent that would interfere with business and be to the disadvantage of the homemarker. As one of your constituents, devoted to assisting the housewife in solving her problems in selection of foods and expenditure of income, I respectfully urge you to vote against the Voigt bill.

Jean Prescott Adams, Delegate National Convention General Federation of Women's Clubs.

[fol. 505] Chicago, Ill., July 5, 1922.

Senator William McKinley, Senate Chamber, Washington, D. C.:

Chicago housewives favor milk compound for cooking and baking. Would consider it a calamity to have this economical product debarred from trade by passage of Voigt filled-milk bill. Urge you report it unfavorably and use your influence for its defeat.

Dora Earle, Chicago, Ill.

Chicago, Ill., July 3, 1922.

Hon. Wm. McKinley, Senate Chamber, Washington, D. C.:

In the interests of the poor we should not force legislation which would debar from the market economical foods like milk compounds which are not injurious to health. Therefore I ask you to use your influence to defeat the Voigt bill.

Minnie Starr Goodwin, Past President Illinois Federation of Women's Clubs.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

Present legislation against milk compounds is without justification from public health standpoint. I urge you to vote against the Voigt bill.

Eva M. Wilson, Chairman Public Health Illinois Federation of Women's Clubs.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

The combination of skim milk and vegetable fat can be put upon the market at a much lower cost than can whole milk properly labeled. It is a useful and highly nutritious food. I am opposed to the present trade war which would

legislate such combinations off the market. For these reasons I ask you as my representative at Washington to oppose the Voigt bill.

Mrs. John Milloy, Elmhurst, Ill.

Chautauqua, Pa., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

I am opposed to the Voigt bill. If the interests back of the Voigt bill are truly concerned about the health of infants why not substitute a bill making it a penal offense for anyone to manufacture anything that would be deleterious to the health of infants and children and not try to eliminate competition by hiding behind the guise of public health?

Marion H. Biel, Legislative Chairman Chicago Federation Woman's Clubs.

Chautauqua, N. Y., June 30, 1922.

Senator McCormick, Senate Chamber, Washington, D. C.:

Milk compounds have never been proved and never can be proved deleterious to health, so I urge you to use all the influence possible to defeat the Voigt bill. It is an interference with business that should not be tolerated.

Rhoda Viall, Home Economics Teacher, Manteno, Ill.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

Urge defeat of Voigt bill. Am convinced its proponents are actuated by purely selfish motives. The elimination of competition pseudo and not real philanthropy is behind their contention that skimmed milk compounds are fed to babies and constitutes a menace to health; no cases substantiate this claim.

Kate Wood Ray, Chicago Member Women's Allied Drug Club.

Chautauqua, N. Y., July 1, 1922.

Senator Medill McCormick, Washington, D. C.:

Skim milk with vegetable fat put upon the market in properly labeled containers has the approval of our home economics people and of the best medical authorities. The Voigt bill would legislate these products off the market, therefore I urge you to use your influence to defeat it.

Mrs. Otto Heper, Elmhurst, Ill.

Chautauqua, N. Y., July 1, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

The waste of wholesome nutritious food material is economically unsound, and keeps the cost of living higher than necessary. As Voigt bill is aimed at an industry which conserves over a million pounds of skimmed milk a year, I urge you as my Representative to work actively against it.

Leona A. Krag, Member Illinois Women's Athletic Club.

(Whereupon an adjournment of the hearing was taken until July 9, 1922, at 10:30 o'clock a. m.)

[fol. 506] Filled Milk

Friday, July 9, 1922

United States Senate,
Subcommittee on Agriculture and Forestry,
Washington, D. C.

The committee met, pursuant to adjournment, at 10:30 o'clock a. m., Senator William B. McKinley (chairman) presiding:

Present: Senators McKinley, Kendrick and Ladd.

Senator McKinley: As the proponents of the bill had the whole time at the last meeting, perhaps it would be fair for any one opposed to the bill to have the first opportunity to talk at this meeting.

Who is there here opposed to the bill? Is there no one?

Mr. Holman: I do not think they heard you, Senator.

Senator McKinley: Is there anyone here who is opposed to the bill? I had understood that the S. M. A. people wanted to be heard.

Mr. J. W. Reavis, Williamson Building, Cleveland, Ohio. Mr. Chairman, we represent the Babies Dispensary and Hospital of Cleveland and would like to be permitted to make a statement at this time. I will present Doctor Gerstenberger.

Senator McKinley: Will you give your name to the reporter.

Doctor Gerstenberger: Henry J. Gerstenberger.

(The hour for the convening of the Senate having arrived the committee recessed until 2 o'clock p. m.)

After Recess

Statement of Dr. Henry J. Gerstenberger, Cleveland, Ohio

Doctor Gerstenberger: I am Henry J. Gerstenberger and hold the chair of diseases of children at the medical school of Western Reserve University and am medical director of the Babies' Dispensary and Hospital of Cleveland. I represent here the Babies' Dispensary and Hospital of Cleveland and the Laboratory Products Co., of Cleveland. The Babies' Dispensary and Hospital of Cleveland is interested because it is the institution to which I assigned, on the day of patent application, any rights that I might get under patent protection, and because as the result of this assignment the Babies' Dispensary and Hospital receives from the Laboratory Products Co., the company making and selling this product, an income that is used for researeh work.

The object of S. M. A. was to go one step farther in the attempt to develop an artificial food that would better simulate human milk. There is, of course, no food so well adapted to human infants as human milk. Cow's milk is a decidedly different product. It, by nature, has been made for the calf. Physicians, so they could feed it to human infants, for a great many years—for generations—have been diluting cow's milk and adding to it.

Men before me have tried to do this very same thing, and as time has gone on various advances have been made. Not all of the important details, however, were included in the

improvement made. The one neglected detail on which I concentrated was the character and quality of the fat in artificial foods for infants.

The fat in the cow's milk is distinctly different from that in human milk. The cow's milk fat contains at least 10 per cent of low volatile fatty acids, and human milk contains less than 2 per cent. These low volatile fatty acids have the ability to increase the muscle action of the intestines, or, in plain words, they possess a greater power to cause diarrhea than the higher fatty acids. They are not the sole factor, but a big factor, under certain conditions, in helping a diarrhea along.

Cow's milk fat is different again from human milk fat in certain character numbers. There is no need, however, of going into detail about these. But in order to make a fat like human milk fat it is necessary to select and mix certain vegetable and animal fats.

[fol. 507] Early in the development of this fat we appreciated the necessity that such a fat must contain the fat soluble A in adequate quantity. And so we put a most liberal quantity of the fat soluble A, while doing experimental work way back in 1915, into S. M. A. fat by having in its makeup 10 per cent of cod-liver oil. An additional reason for adding a liberal amount of cod-liver oil was to utilize its great antirachitic power.

The S. M. A. food was from 1915 to 1920 on an experimental basis in feeding many hundreds of infants. At the end of that observation time—that is, January, 1920—it was decided that enough evidence had been obtained to prove its value and its harmlessness, so that it was made available to the medical profession of Cleveland and vicinity. During these past two and a half years the use of this food has increased tremendously in Cleveland, and since December, 1921, outside of Cleveland.

To give you an illustration as to how well it has been accepted by the medical profession of Cleveland, I can give the figures of the number of sales per month during the past two and a half years: January, 1920, 1,000 per month; June, 1922, 37,000.

Last November the Central States Pediatric Society met in Cleveland. This society counts among its members the big children's men in the Middle West, and I presented evidence in favor of S. M. A. to these men by asking some of my colleagues to tell their feeding experiences with S. M. A.

Partly as a result of that meeting S. M. A. has been used in various cities outside of Cleveland.

In December, 1921, S. M. A. in powder form was placed at the disposal of all of the physicians of the country, after it had been made, fed, and kept under varying conditions by me for a whole year previous—1920. And since April, 1922, S. M. A. is also available in a concentrated liquid form.

Now, outside of this specific accomplishment in adapting an artificial fat to human milk fat there is a much bigger and broader accomplishment in the general acceptance of this S. M. A. food. It is often very difficult for the average family physician, if an infant once loses mother's milk, to make an adequate artificial mixture. This is in no sense a criticism of the family physician, but it is true that it is often difficult for him, under the conditions under which he must work, to make a mixture of cow's milk that suits the infant's needs.

A great many infants do not thrive because they have not had a proper milk mixture and they do not get this proper mixture because the average practitioner naturally has not had the training of a specialist in making up modifications of cow's milk. It is these infants who will be protected by S. M. A. through the family physicians, and as a result we will have many more well infants and children.

We know enough about infant nutrition to appreciate that if we put in the mixture at least the minimum amount of the essential food elements and put them together in the proper proportions and give this mixture enough calories and bulk we can have a mixture that can be fed with a great deal of ease and simplicity by the average practitioner.

We have not seen one case of spasmophilia, nor have we seen one case of rickets developed in the very, very numerous infants and children I have seen, and I should say that at least 5,000 have been fed with S. M. A. so far.

Senator Kendrick: How long has this food been used generally?

Doctor Gerstenberger: Since January 16, 1920, in Cleveland, and since December 1, 1921, outside of Cleveland.

Senator Kendrick: Something more than a year?

Doctor Gerstenberger: Not quite a year outside of Cleveland. In order to make it available outside of Cleveland it has been put in powdered form and in concentrated liquid form.

Senator Kendrick: Do you mean by that that it will not keep in perfect condition in other than powdered form?

Doctor Gerstenberger: No; but you could not very well ship it in liquid form, put up simply in a quart bottle or a pint bottle. It would be difficult to control the temperature carefully and prevent its deterioration. Therefore, it is necessary to have it either in powdered form or in cans in sterilized, concentrated liquid form.

Another fact in which you are interested is this one: S. M. A. does not reduce the amount of cow's milk used, but it rather increases it. It contains over one-third of a quart of skimmed milk and about 62 grams of milk sugar. In order to get the 62 grams of milk sugar we need nearly another quart and a half of milk, and as it is difficult to get 100 per cent of milk sugar out of the milk you can see that 2 quarts of cow's milk are needed for the manufacture of 1 quart of S. M. A. So it increases the use of cow's milk. It provides the general practitioner with a food that he can feed to the big bulk of infants who have for some reason or other lost the advantage of human milk, with much better results than ever before.

Senator Kendrick: Have you had any opposition to the manufacture of your product?

Doctor Gerstenberger: From physicians?

Senator Kendrick: From anyone.

Doctor Gerstenberger: We have not had any opposition that we know of, although some individual physicians have objected, and especially some of the specialists, who think this food is too easy to feed and that as a result they may lose some of their patients. And this may be true, for the big group of family physicians is the type of physician that is especially going to be benefited, and it is the family physician who gets these babies first, when they are still well.

Now, I have data here that I wish to submit to the committee for its information, charts showing how many of these infants have gained and how many of these have been on the food for a year or more; and a booklet that has been written only for physicians, giving directions how to use S. M. A., and a leaflet to be given by physicians to the mothers telling them exactly how to prepare the milk.

I have here a roll of answered questionnaires that were sent out last June, in preparation for the pediatric meeting we held last November, by physicians to mothers of infants

for whom they had ordered S. M. A., asking them to fill out the answers to the questions, which were designed to show the condition of the children at the beginning and at the end of S. M. A. feeding and to indicate in detail the progress or regress observed in the individual case.

In this other roll are general questionnaires filled out by physicians themselves who have fed S. M. A. for a long time, and they answer four specific questions as to the importance and value of S. M. A. in thgir experience. These are signed by the men.

Then I have here a pamphlet containing memoranda that I beg to have incorporated in the proceedings of these meetings, giving the evidence why this food should be protected, why it should be excluded from the act and the reasons why it has been made and how it is made and the factors that make it safe and valuable for consumption by infants.

Senator McKinley: Did that go in the House record before?

Doctor Gerstenberger: No; we knew nothing about the House meetings.

Senator McKinley: Well, if you come to an agreement with those in favor of the bill, what is the necessity of all those things in the record?

Mr. Reavis: It represents the facts. That was made up before there was any agreement reached. We want that put in the record merely as a matter of fact.

Mr. Bryan: May I ask the witness one or two questions before he leaves the stand?

Senator McKinley: Yes.

Mr. Bryan: Doctor, as I understand it, this S. M. A. contains a number of substances that are supposed to supply vitamines and other nourishing elements which are absent from condensed skimmed milk and from Hebe, is that correct?

Doctor Gerstenberger: Yes.

Mr. Bryan: So that in a sense S. M. A. is on the opposite pole from those compounds we have been discussing in this bill?

Doctor Gerstenberger: I think that is so.

Mr. Bryan: Will you tell the committee exactly what is in S. M. A.?

Doctor Gerstenberger: The exact figures are in this pamphlet which I gave you. May I have it. In order to make

up a little over 10 liters of S. M. A. it requires 3,980 grams of skimmed milk——

Mr. Bryan (interposing): Just tell us the percentage, approximately, of each element in the finished product.

Doctor Gerstenberger: Abut 37 per cent of skimmed milk.

Mr. Bryan: Thirty-seven per cent of skimmed milk?

Doctor Gerstenberger: About that, and about 60 per cent of water. That is, not in these preparations here, but in the finished preparation. I can give you the exact chemical analysis from the label on the can. The milk sugar content is 7.5 per cent.

Senator McKinley: You are getting over 100 per cent.

Doctor Gerstenberger: I see what you mean. Let me put this in these figures here: Skimmed milk, 3,980 grams; distilled water, 5,820 grams; milk sugar, 631 grams; salts, 2 grams; compounded fat, 400 grams. That mixture gives you about 1.2 per cent protein, 3.5 per cent fat, 7.5 per cent sugar, and 0.2 per cent salts.

Mr. Bryan: What kind of fat do you use?

Doctor Gerstenberger: We use a fat that is made up of varying amounts of cod-liver oil, cocoa butter, coconut oil, tallow, and tallow oil.

Mr. Bryan: Just one more question, Doctor. This present bill, as it now stands, before amendment, only prohibits the interstate transportation of these compounds which have been blended or compounded with fats or oils other than milk fat, so that the resulting product is in imitation or semblance of milk, etc. Do you think this product of yours is in imitation or semblance of milk?

[fol. 508] Doctor Gerstenberger: It is an imitation of human milk.

Mr. Bryan: It is an imitation of human milk, but would you say it is the semblance of milk or evaporated milk?

Doctor Gerstenberger: It looks like evaporated milk.

Mr. Bryan: You think that the bill as it now stands might catch your product as being in imitation or semblance of milk?

Doctor Gerstenberger: I do, indeed.

Mr. Bryan: And for that reason you desire the clarifying amendment?

Doctor Gerstenberger: Exactly.

Mr. Bryan: Just one more question. Is the process by which this article is produced patented?

Doctor Gerstenberger: I do not know whether the process is patented.

Mr. Bryan: Is it a proprietary or patented article?

Doctor Gerstenberger: The patent has been applied for.

Mr. Bryan: By whom?

Doctor Gerstenberger: It was applied for by me and I assigned it immediately to the Babies' Dispensary and Hospital of Cleveland.

Mr. Bryan: Patent has not yet been granted?

Doctor Gerstenberger: The patent, I think, was granted this week.

Senator Ladd: Does that patent require the use of cod-liver oil as one of the constituents of this preparation?

Doctor Gerstenberger: No; I do not think it requires the use of cod-liver oil.

Senator Ladd: In other words, they might use any fat they chose as far as the product is concerned? I am not talking about the effect on the infant.

Doctor Gerstenberger: No; in the patent application, Senator Ladd, the fats, as I have just described them, are presented and that fat compound contains cod liver oil and would have to contain cod liver oil.

Senator Ladd: But there is nothing in the patent that would prevent the company that manufactured it using some other oil for some other purpose if they wanted to do so?

Doctor Gerstenberger: I do not think I can answer that question. I would not answer it definitely without having the data before me. But our whole idea is, of course, to have a food that is going to protect infants.

Senator Ladd: I am not raising any question on that. I just want to be clear about some of the other facts.

Mr. Bryan: In other words, Hebe is not an infant food from the fact the manufacturers say it must not be used by infants, and your product is especially for infants, and, therefore, it is just the opposite of Hebe?

Doctor Gerstenberger: Exactly the opposite.

Senator McKinley: The testimony given the other day made an impression on my mind for this reason: There was a claim that Hebe or these other products were not healthful to mature people. There was the definite statement that the vitamines, which are essential to life were all extracted when the butter fat was taken out and there were none supplied. Now, you have not said that you

were going to supply any. You say you do not know how much there would be or whether there would be any cod liver oil in it.

Doctor Gerstenberger: Oh, no; in this food you have got——

Senator McKinley (interposing:) I understand, but did you not answer Senator Ladd that you did not know whether there would be any cod-liver oil in it or not?

Doctor Gerstenberger: He was asking about a patent.

Senator Ladd: The point I was raising is that under the patent it does not require that cod-liver oil shall be used, but any other oil might be used if they chose to use it for any purpose, but for the purpose of child food you do include cod-liver oil as one of the essential constituents?

Doctor Gerstenberger: I do not think the patent is worded just that way. It is described in this pamphlet here, and it is a patent on a combination of fats, and it contains cod-liver oil. It does not contain a specific statement that it must contain cod-liver oil, but it would contain it. It calls for this combination which contains cod-liver oil.

Senator McKinley: Is there enough cod-liver oil in there to supply sufficient vitamines?

Doctor Gerstenberger: In the statement I made before I said we had not seen a single case of rickets in seven years nor one case of spasmophilia, and we can show that it not only does not produce rickets but that rickets is cured by it. During the past year it has been possible to determine the calcium and phosphorus content of the blood in animals and in humans, and accordingly we can know when the change for the better occurs in a rachitic infant. I have records which show that the abnormal calcium and phosphorus content of the serum of spasmophilic and rachitic infants has been increased to the normal level and also records that demonstrate by use of the X ray that rachitic bone has been replaced by normal bone solely by feeding S. M. A.

Before this whole recent discussion of cod-liver oil came up, I incorporated in 1915, on an experimental basis, 10 per cent of cod-liver oil, and S. M. A. fat has contained that much ever since.

Senator McKinley: What do you mean by 10 per cent? Ten per cent what?

Doctor Gerstenberger: Ten per cent of the fat. And Doctor McCollum has shown that when 2 per cent of the food solids in the diet of a rat are represented by cod liver oil the food is capable of preventing and curing rickets in rats. The cod-liver oil content in our mixture is over 2 per cent, and then, as I have just stated, we have the objective data to show you at any time you wish to see them that will prove conclusively that S. M. A. not only prevents rickets but cures it.

Mr. Bryan: Does this contain as many of the vitamines as whole cow's milk?

Doctor Gerstenberger: It contains a great deal more of the fat soluble A, a great deal more; the cod liver is 100 times richer in this than is butter fat, and then it contains the antirachitic factor in considerable amount in addition.

Senator McKinley: The fat soluble A contains the vitamine that determines?

Doctor Gerstenberger: There are all told four vitamines or growth factors. Fat soluble A is the first one, and then follow the water soluble B, the water soluble C, and then this new one that McCollum has just presented in the Johns Hopkins bulletin that he talked about here and that he calls the antirachitic vitamine. The first and the fourth seem to be especially associated with fats, but they are not fats; they are, however, usually together with fats.

Mr. Bryan: The similarity between S. M. A. and milk is in the appearance of it, is it not?

Doctor Gerstenberger: Yes, sir.

Mr. Bryan: How about the taste?

Doctor Gerstenberger: I should say the taste is different from cow's milk.

Mr. Bryan: Quite different?

Doctor Gerstenberger: It is different.

Mr. Bryan: Is the skimmed-milk which is used in S. M. A. evaporated or fluid skimmed milk?

Doctor Gerstenberger: Fluid skimmed milk.

Mr. Bryan: How do you obtain it?

Doctor Gerstenberger: The Laboratory Products Co. that is making S. M. A., I think, gets it from the farmers in the neighborhood.

Mr. Bryan: Is Doctor McCollum familiar with this product?

Doctor Gerstenberger: He is.

Mr. Bryan: Has he ever expressed himself in regard to it?

Doctor Gerstenberger: He has expressed himself to me as its being a fine piece of work from reports he has had of it from people whose opinion he appreciates. He has not fed it directly, but I know Doctor McCollum well enough to know that if he looks at the formula he is bound to say it is a good food.

Mr. Bryan: Are any dieticians or physicians familiar with your product?

Doctor Gerstenberger: A great many physicians.

Mr. Bryan: I mean specialists or scientists.

Doctor Gerstenberger: Doctor Marriott, of St. Louis, professor of pediatrics, is familiar with it.

Mr. Bryan: Who else?

Doctor Gerstenberger: Numerous men in the country who are feeding S. M. A. at the present time. There are two gentlemen here this afternoon who have fed S. M. A. for quite a time, who will be glad to tell you of their experience.

Mr. Reavis: I would like to call Doctor Bolt.

Doctor Gerstenberger: Mr. Chairman, the Babies' Dispensary and Hospital registered the term "S.M.A." It is simply a trade-mark for a compound for infant feeding, as indicated on the label on the can.

Mr. Bryan: The label contains no statement as to any milk being in the contents.

Doctor Gerstenberger: No, sir.

Mr. Bryan: The purpose is to have this substance administered only under a physician's prescription or order; is that correct?

Doctor Gerstenberger: That is so.

Mr. Bryan: It is not to be sold by grocery stores?

Mr. Reavis: Is it sold in Cleveland?

Doctor Gerstenberger: It is not sold in grocery stores, and if I have anything to say about it it will never be.

Mr. Bryan: It will be sold through drug stores?

[fol. 509] Doctor Gerstenberger: Yes, on the prescription of a physician. But I see no objection to its being sold through agencies like the Walker-Gordon Laboratories.

Mr. Bryan: There is no intention of having it offered for sale on the shelves of grocery stores?

Doctor Gerstenberger: Every effort and every plan is to do the opposite.

Mr. Bryan: And only to be used on the order or prescription of a physician?

Doctor Gerstenberger: Only on the order of a physician.

Mr. Reavis: I would like to call Doctor Goehle, of Cleveland.

Statement of Dr. O. L. Goehle of Cleveland

Senator McKinley: Will you give your name to the reporter.

Doctor Goehle: O. L. Goehle. Mr. Chairman, I am attendant at the Cleveland City Hospital and the Lakewood Hospital and the St. Johns Hospital, and I am also attending director of the Lakewood Dispensary, and these positions give me ample opportunity to have many feeding cases under my charge. I have for the last seven and one-half years been using S. M. A., five years with Dr. Gerstenberger at the Babies' Dispensary and then two and one-half years since it has been put out for public use in Cleveland—in other words, two and one-half years in private practice and also at the dispensaries where I am officiating.

I have used it for children, infants, premature infants, even from the first day, and I have used it over long periods, a good many times longer than 10 months and quite often as long as a year. So I have been able to watch the growth and development of these children under this food, and there are, I think, all told about 700 children that I have fed it to, and within the last two and one-half years I think I have had about 500 private children and about 120 of those are on my list right now. These children stand out among other children on artificial foods as especially finely developed, sturdy, well-fed children, coming close to and in a good many instances, I believe equaling breast fed children.

Their average of weight progress is well above the normal; their skin is soft and smooth, the tissues are firm, muscles are well developed, and their bony frame work is particularly fine. I do not know of any children that have any better teeth than they and I have been able to follow those children two or three years later, and I do not find any evidence of early decay, so that all in all the effect has been very gratifying from the medical point of view. And judging from the demand as it is made by my mothers

who have either seen other mothers' babies on S. M. A. or who have had one or two children in their family on other foodstuffs, and have had one youngster S. M. A. and who then have a new baby come in, they are very much impressed with the results obtained with S. M. A.

They come in and make the demand for S. M. A. for two reasons, either because they want a baby as good as Mrs. So-and-So's, or because they wish this baby to be as good as the S. M. A. baby they have had. And then one of the biggest reasons is that they know they can not get it except on a doctor's prescription.

I have had no deleterious effects at all in the many cases I have seen, and absolutely no rickets, and this very dreaded condition which grows panic in the mother's heart, this tendency toward convulsions that so many children get on artificial feedings—I have not met this in these children I have fed S. M. A.

From the point of view of infant feeding I think it is really a Godsend. It is fool proof against the attempts of mothers to meddle with the food. The universally general result has been excellent.

I think that is about all I have to report.

(Whereupon an adjournment was taken until August 1, 1922, at 10:30 a. m.)

FILLED MILK

Hearings Before a Subcommittee of the Committee on Agriculture and Forestry

United States Congress Senate

Sixty-Seventh Congress, Second Session

on

H. R. 8086

To Prohibit the Shipment of Filled Milk in Interstate or Foreign Commerce

August 1, 2, 3, 4, 5, and 7, 1922

Part 2

Printed for the use of the Committee on Agriculture and Forestry

[fol. 510] Committee on Agriculture and Forestry

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Subcommittee on H. R. 8086

William B. McKinley, Illinois, Chairman

Edwin F. Ladd, North Dakota.
John B. Kendrick, Wyoming.

Filled Milk

Tuesday, August 1, 1922

United States Senate,
Subcommittee of Committee on Agriculture and Forestry,
Washington, D. C.

The subcommittee met, pursuant to adjournment at 10:30 o'clock a. m., in room 224, Senate Office Building, Senator William B. McKinley (presiding).

Present: Senators McKinley, (chairman) Ladd, and Kendrick.

Senator McKinley: The committee will come to order. This meeting is adjourned from July 7, and it perhaps might be well to know who are represented here, if the gentlemen will state.

Senator Kendrick: Mr. Chairman, I suggest, in order that there may be no unnecessary delay, that we have a list, as nearly as possible, in advance, of those who want to be heard, and that we make the request of each witness to be as concise as possible in order to explain fully everything that he cares to say about the bill.

Senator McKinley: I might add also that if a witness has testified at the House hearings he need not repeat the same testimony here.

Senator Kendrick: Well, he may have something to add to it. My intention and thought is not to in any way restrict the fullest discussion of it or the fullest statement about it, but, as you know, we have been in the past delayed by failure of witnesses to follow the example of Senators and wander far afield in their discussion on the subject.

Senator McKinley: I have here the name of Mr. Louis N. Geldert, representing the Interstate Cotton Seed Crushers Association, who wishes to testify. Now, if the other gentlemen will state their names.

Mr. Alfred R. Urion: Mr. Chairman, I am a practicing lawyer and am here representing the interests of the Hebe Co. Associated with me is Mr. Ralph W. Jackman, of Madison, Wis., also a practicing lawyer.

We were not present at either the hearing on June 29 or the hearing on July 7, for the very good reason that no notice was ever received by us for the meeting of June 29, and no notice was received in time for us to be present at the hearing on July 7, the notice having reached us in Chicago on the evening of the day before the hearing, that is to say, on July 6. This explains some of the criticism that has been aimed at us to the point that we were seeking to delay hearings, and I wish to make that explanation.

Inasmuch as we were not present at these hearings, our understanding being that the hearings would not begin until after the 4th of July, we requested that some of the gentlemen who appeared before the committee on the dates named be asked to come back that we might question them on some points which we regard of vital importance to the committee, in enabling it to make up its mind as to the final report. We asked that Doctor McCollum, of Johns Hopkins University, be one of those gentlemen, that we might ask him some questions involved in the issue.

Another gentleman was Mr. Holman, the resident secretary in Washington of the National Milk Producers' Federation. We should also like to know who appears as counsel for the proponents of this bill. I believe the record, if I have not overlooked the fact, does not state who Mr. J. Wallace Bryan represents. I would like to have that go into the record.

After these witnesses for the proponents have been recalled and reexamined, and any other witnesses the proponents of the measure wish to present, I would then like to make an opening statement for the record as to the testimony which the opponents of the bill, or the opponent of the bill, will offer for the bill as now prepared is aimed only at one manufacturer, one industry, to the exclusion of many others, by the very adroit and careful wording of the bill, which I shall attempt to point out in my statement.

[fol. 511] Mr. Holman: Mr. Chairman, the proponents of the bill understood that to-day was to be specially given to the opposition. Speaking for our people, we have no objection whatever to taking the stand again, but we prefer to wait until some of the direct testimony has been presented from the opposition.

Mr. Urion: Mr. Chairman, if I may be heard a moment further, we are here on the defensive, to prevent the destruction of our industry. We believe a smoke screen has been built up around the real purposes of this legislation, and as we are on the defensive, it seems only fair that we should know exactly what charges we have to meet, and they are charges. They are charges that we are poisoning the babies of this country, and we want to get all of the facts covering that, to know why we are poisoning the babies—what it is. We want to know what it is that is unlawful that we are doing before we put upon the stand our scientific men—and we will have a large number of them—to meet the issue. It seems only fair.

Mr. Holman: May I ask the gentleman if he has not read the testimony presented by the witnesses at the recent hearing?

Mr. Urion: Yes; but we have had no opportunity to ask some questions of our own. For instance, some of the witnesses who will be recalled have testified under oath in a case pending in the courts, and I hope to point out some differences between that testimony under oath and the voluntary testimony before the committee.

Mr. J. Wallace Bryan: What are the names of those witnesses?

Mr. Jackman: For whom do you appear?

Mr. Bryan: I might suggest if Mr. Urion has any charges to make against any of the witnesses for committing perjury or garbling testimony I think he should state their names in advance.

Mr. Urion: I made no such insinuation.

Mr. Bryan: It sounded that way, sir. You say the testimony is not the same before this committee as it was before the courts. I think it is more than an insinuation; it is a charge.

Mr. Urion: I don't wish to enter into any controversy. I made a statement of fact.

Mr. Bryan: The record will show what you said.

Senator Kendrick: Mr. Chairman, if I may, I move that we proceed to hear the witnesses who are opposed to this bill, and then make our arangements later on for the recall of such witnesses as it seems right and proper should be recalled.

Senator Ladd: I second the motion.

Senator McKinley: I might just make this statement, that a letter came asking me if I would write and invite Doctor McCollum here and I did so, and he very kindly replied immediately, on July 22, "In compliance with your request in your letter, asking me to appear before the committee hearing argument relative to the Voigt bill on August 1, I should be glad to be present at that time to give the committee such assistance as I may be able to render."

The doctor is here.

Mr. Holman: Mr. Chairman, at the last hearing there was a representative of Mr. Urion present and he made no attempt to ask any questions at that time. We are perfectly willing to answer any questions and to remove the smoke screen.

Senator McKinley: Do you object to Doctor McCollum testifying?

Mr. Holman: At the present time, we will.

Senator McKinley: The decision of the committee is to go on with the testimony.

Mr. Urion: We spent our time, Mr. Chairman, preparing to take up with Doctor McCollum, who we understood would be here to-day at our request, as our first step in the proceeding, and we have asked some other witnesses

to appear later in the day. It seems that we ought to be accorded the privilege of asking Professor McCollum some questions. Had we been present—and we would have been present had we received notice—we would have been accorded that courtesy at the time of his finishing his direct statement.

Senator Kendrick: Have you no testimony of your own to offer?

Mr. Urion: We will have a number of witnesses here.

Senator Kendrick: Why not make that offering to the committee, and then allow the committee, as we have suggested, to recall these witnesses and give you a perfectly good chance to ask them such questions as seem right and proper, and through that means give full publicity to everything in connection with it. The committee, if I may say so, has already, I think, been indulgent. It was the thought and belief that we should go on and complete our hearings some weeks ago. You have been given the opportunity for delay and to meet your requirements. Now it seems to me that you should proceed with your witnesses, as one member of the committee, and then we will recall these witnesses if they can be induced to return, and allow you to ask them such questions as you care to.

Mr. Urion: Of course, Senator, we will have to bow to the request of the committee.

Senator Kendrick: I don't believe the committee has the power to force any of these witnesses to testify.

Mr. Urion: We are prepared to go on with Dr. McCollum.

Senator Kendrick: Mr. Chairman, at 11 o'clock we have to go and vote. If they have not anything to say this morning I think we had better adjourn until then.

Senator Ladd: May I say, Mr. Chairman, we have a meeting of the Agricultural Committee, as you know, at 2 o'clock, so we had better adjourn until to-morrow morning.

Senator McKinley: So many people are from out of town it would not be fair to them. I think you had better put some of your witnesses on, Mr. Urion, or perhaps Mr. Geldert would like to make his statement now.

Mr. Gelbert: Mr. Chairman, I was going to ask the committee's indulgence for a moment inasmuch as what I have to say is of a general nature in objection to the bill on the part of the cotton-seed crushers of the United States, the people who convert the cotton seed into products in edible

form, and with your permission I will attempt, by a very brief statement, to put our objections before you, and then let the Hebe Co. take up its own matter later. Will that suit your record?

Senator Kendrick: Mr. Chairman, I want to say to the witness, so he will understand, that if we are called and find it necessary to go and vote we will come right back, or I will, at least, and we will go right on, so that he will have opportunity to finish when once he starts.

Statement of Mr. Louis N. Geldert, of Washington, D. C., Assistant to the President, Interstate Cotton-Seed Crushers' Association.

Mr. Geldert: Mr. Chairman, I represent the Interstate Cotton Seed Crushers' Association, which is an organization of the oil mills of this country which, for the most part, crush cotton seed and convert it into four products, oil, meal, hulls, and linters. They are known as crude products, because, with the exception of hulls, they have to go through certain processes of manufacture before they are ready for consumption. That industry, with about seven hundred or more crude oil mills, represents what Mr. Hoover, during the war, called the one great essential industry of this country, that which provided the supply of oils and fats for our army and foreign nations.

I have been directed by the president of the Interstate Cotton Seed Crushers' Association, Mr. A. G. Kahn, of Little Rock, Ark., to appear before you and protest against the type of legislation embodied in the bill H. R. 8086.

I may state that the Interstate Cotton Seed Crushers' association is the official organization of the oil mill industry of the United States, including the great majority of the cotton-seed mills of the South, many of which are also crushers of peanuts and copra, from which coconut oil is made.

The president of the Interstate Cotton Seed Crushers' Association and the members thereof have viewed with grave alarm the strange and almost unbelievable action of the House of Representatives in passing the bill H. R. 8086, which contains language to the effect that the admixture of any fat or oil other than milk fat with skimmed milk constitutes a fraud upon the public and creates a product which is declared adulterated and a deleterious article of

food which can not be shipped in interstate or foreign commerce.

The sweeping statement of "any fat or oil other than milk fat" includes every vegetable oil produced within the United States. It means that cottonseed oil, peanut oil, corn oil, and coconut oil all produced in great quantity in the United States, are uniformly labeled as unhealthful and deleterious articles of food. This is preposterous and we submit is a most astounding statement. For 40 years cottonseed oil has been a staple article of food in the United States. Peanut oil and corn oil have long stood in high esteem as food stuffs for human consumption.

[fol. 512] Vegetable oils have been regarded as prime articles of food since time immemorial. In the Mediterranean stations olive oil has for hundreds of years—I might say thousands—been a standard article of diet. The natives in these regions have practically not known of the use of hog fat or butter fat for culinary purposes. They have depended on olive oil from their olive groves. American cottonseed oil has for the past quarter of a century been sold in Italy and other olive oil producing and consuming nations and has been used by the people of those countries for the same purposes for which olive oil is ordinarily employed, showing that it ranks equally high as a foodstuff in their esteem.

Eighty per cent of the cottonseed oil produced in the South is manufactured into vegetable lard. A considerable portion of the remainder goes into oleomargarine. These are the very best articles of food obtainable. They are both used for culinary purposes in millions of homes throughout the land. I might say there that vegetable oil compounds are used by the people of the dairy states of this country, in the Middle West, in much larger quantities per capita than they are in the nondairying States, showing that the dairy people themselves greatly appreciate our vegetable oil products.

We do not believe that anyone would have the audacity to claim that these two products of cottonseed oil, oleomargarine and lard compound, or, as we have sometimes known it, lard substitute, are unhealthful and deleterious articles of food, yet on the other hand we would not have believed that anyone would have had the audacity to claim that a mixture of skimmed milk and vegetable oil is unhealthful and deleterious.

These so-called filled milks, as we understand it, are all utilized for culinary purposes, just as are lard substitutes, and, to a large extent, are oleomargarines. Our cottonseed oil and peanut oil has found a profitable outlet in these culinary products, and we see no reason why we should be denied the possibility of another profitable outlet for cottonseed oil and peanut oil in the manufacture of another culinary product, to wit, filled milk. We protest vigorously against any effort to legislate such a product out of existence.

We know that the charges of unhealthfulness and deleterious attributes are but subterfuge. If skimmed milk and vegetable oil are per se neither deleterious nor unhealthful, it is manifest that a combination of the two can not be unhealthful. We are *are* aware there has been some contention to the effect that these products were used as infants' food in place of whole milk. In our observation, however, they have been used only for culinary purposes. We think that the housewives of the nation have as much right to use milk compounds for culinary purposes as they have to use lard compounds, and no one has ever disputed their right to use the latter or the right of anyone to manufacture this valuable cotton seed oil product.

Gentlemen, I would like very much, before I close, to ask, say, Mr. Holman, one or two questions, if he would be willing to answer them.

The Chairman: Mr. Holman, are you willing to answer any questions?

Mr. Holman: Yes.

Mr. Bryan: Provided we can ask a few questions when he makes his statement.

Mr. Kendrick: Have you completed your statement?

Mr. Geldert: Yes; with the exception of a few questions I would like to ask Mr. Holman. He was one of the leading witnesses in favor of this bill. They are very brief.

Mr. Holman: Mr. Chairman, we will preserve our original intention. We will be glad to answer any questions later. We have a great many questions to ask the gentleman right there.

Senator McKinley: Do you decline to be questioned?

Mr. Holman: I do not decline to be questioned.

Senator McKinley: Well, you either do or you do not.

Mr. Holman: But at this time.

Senator McKinley: Do you decline to be questioned?

Mr. Holman: No; Mr. Chairman.

Senator McKinley: Then ask him the questions.

Mr. Geldert: I want to ask this question. Does he know, or does he not know, that coconut oil, prior to usage—I am referring to his testimony with regard to the insanitary condition of copra from which coconut oil is produced; he claims to have seen it handled in the rough in oriental countries—does he or not know that coconut oil, prior to usage, is refined and deodorized, and that it would be absolutely impossible for any form of germ life to pass through the refining process and the tremendous heat of superheated steam required in the deodorizing process?

Mr. Holman: Do you want yes or no?

Mr. Geldert: I want to know whether you know that fact.

Mr. Holman: The gentleman is referring to my testimony before the Senate Finance Committee in connection with the tariff bill, in which I made—no. Pardon me, I made the statement there, and also before the committee of the House.

Mr. Geldert: That is what I had reference to.

Mr. Holman: In which I made the statement that I have seen Japanese and Chinese coolies with sores all over their feet, with sores on their bodies, and some of them I know of a syphilitic character, wandering over the junks and handling the copra from which the coconut oil is extracted. I have no further statement to make as to what might happen to the oil after that.

Mr. Geldert: All right.

Mr. Holman: I only make that as a statement of fact of what I have seen.

Mr. Geldert: I just wanted to know if you knew that the refining and deodorization process for all vegetable oils were of such a nature that no germ life could pass through them.

Mr. Union: It seems to me that question calls for a direct answer.

Mr. Bryan: I think he got it.

Senator McKinley: We have no power to make him answer. If he wants to side step he has that right.

Mr. Geldert: I would like to have that go into the record.

Mr. Holman: The gentleman asked me a scientific question which might be answered more properly by some of our scientists here.

Mr. Geldert: Since you make the charge that the coconut oil is unclean, we would like to know whether this includes cottonseed oil, peanut oil, and corn oil?

Mr. Holman: The gentleman has read the wording of the bill?

Mr. Geldert: I am referring to the wording of the bill.

Mr. Holman: I think that is a sufficient answer to the question.

Mr. Geldert: They are all vegetable oils which may be used in place of coconut oil in the manufacture of filled milk. That is all I have to say.

Mr. Bryan: We would like to ask the witness some questions.

Mr. Urion: Mr. Bryan has not yet favored us with a response to the question I asked that he enter upon the record the names of the clients he represents in this hearing. May we ask that that be done?

Mr. Bryan: I represent the Borden Co., of New York; the National Federation of Milk Producers; and Mr. Balderston, and the National Dairy Council.

Mr. Urion: Thank you.

Mr. Bryan: Yes, sir.

Your main criticism of the House bill, Mr. Geldert, is the; the word "deleterious" is used in the description of the milk compound. Is that correct?

Mr. Geldert: No. I am referring to the wording of the bill, and assuming that you are a proponent of that bill.

Mr. Bryan: Yes; I am.

Mr. Geldert: And therefore that you agree with this wording.

Mr. Bryan: If the word "deleterious" was stricken out of the bill that would neutralize the greater part of your criticism. Is not that the fact?

Mr. Geldert: I would not say that would; no.

Mr. Bryan: Three-fourths of your challenge was directed to that point.

Mr. Geldert: I wanted to know whether you included other oils in your charge against coconut oil.

Mr. Bryan: We include them all; yes.

Mr. Geldert: Then you are making a charge against the other vegetable oils, including cottonseed oil, peanut oil, and corn oil?

Mr. Bryan: The principal criticism contained in your statement, as I understand it—and I listened very care-

fully—is that issue is taken with the statement in the House bill that the product is deleterious. Your whole statement, apparently, is with a view to refuting that allegation in the House bill; that it is preposterous and absurd. Is that correct? If that word is stricken out of the House bill the greater part of your criticism would fall to the ground, would it not?

Mr. Geldert: Our criticism is against the form of legislation which is represented by that bill, which is strictly class legislation, selfish, absolutely, and never should be allowed on the statute books of this country.

[fol. 513] Mr. Bryan: Now you are changing your ground, Mr. Geldert?

Mr. Geldert: No. I introduced that in the first place. That is my main objection or contention against this bill. I took up the other points later.

Mr. Bryan: I submit to the committee that the greater part of the statement was on the side of the absurdity of the statement in the House bill that vegetable oils are deleterious substances, and referred to very prominently.

So that your criticism is off the type of the legislation now?

Mr. Geldert: My introductory remarks showed what our main objection was—absolutely to the character of the legislation.

Mr. Bryan: And how much coconut oil does your organization manufacture?

Mr. Geldert: The mills——

Mr. Bryan: You have 700 mills. How many of those are devoted to coconut oil?

Mr. Geldert: There are probably half a dozen mills on the Pacific coast that crush nothing but copra, a large part of which they get from the Philippines, which is a possession of the United States. There are very few mills in the East devoted entirely to coconut crushing.

Mr. Bryan: Please answer the question. How many mills crush coconut oil of the 700 that you said your organization represents?

Mr. Geldert: Not over a dozen.

Mr. Bryan: Not over a dozen. So that, so far as Hebe is concerned, in its present form, the exclusion of the manufacture of Hebe would simply affect the product of a dozen mills out of the 700? Is that correct?

Mr. Geldert: I hold no brief for the Hebe Co. or for coconut oil. Our main product of the mills represented in the Interstate Cotton Seed Crushers' Association is cottonseed oil and peanut oil, and I am here defending cottonseed oil and peanut oil and am prepared to do so to any extent that is necessary.

Mr. Bryan: Is cottonseed oil being used, as a matter of fact?

Mr. Geldert: It is possible to use it.

Mr. Bryan: One moment. Is it being used now as an ingredient of milk compounds?

Mr. Geldert: I don't know, Mr. Bryan, to what extent the Hebe Co. may be making use of it. I do make the statement that it can be used, and we expect and hope for an outlet for cottonseed-oil products through that industry; but as for the Hebe Co., I don't know what its processes are.

Mr. Bryan: At the present time, to your knowledge, not much cottonseed oil is being used for milk compounds? Is that correct?

Mr. Geldert: I should judge not.

Mr. Bryan: So that your theory now is that you may be deprived of a future market?

Mr. Geldert: I believe some peanut oil is being used, and that is produced very largely by our member mills.

Mr. Bryan: So you fear you may be deprived of a future and not a present market; is that correct?

Mr. Geldert: We are not fearing.

Mr. Union: Mr. Chairman, may I ask that the witness return later? I may want to ask him some questions.

Mr. Bryan: I have not finished with him yet.

Does your association include any foreign members?

Mr. Geldert: No, sir.

Mr. Bryan: Any importers?

Mr. Geldert: Some importers and some exporters.

Mr. Bryan: Who are they?

Mr. Geldert: I could not name them offhand.

Mr. Bryan: Approximately how many members?

Mr. Geldert: Not over half a dozen importers, but more than a hundred of our members are exporters.

Mr. Bryan: Procter & Gamble belong?

Mr. Geldert: Procter & Gamble belong as manufacturers of cottonseed products. They also have a mill organization

known as the Buckeye Cotton Oil Co., operating a dozen crude cottonseed oil mills.

Mr. Bryan: How about Japanese members? Have you any Japanese members?

Mr. Geldert: We have two of the large Japanese people who are members of our association.

Mr. Bryan: Where are they located?

Mr. Geldert: One in New York, I think, and one in Seattle or San Francisco.

Mr. Bryan: What are their names?

Mr. Geldert: Mitsui & Co. is one and I forget the other one at the moment.

Mr. Bryan: Are they branch offices?

Mr. Geldert: Yes.

Mr. Bryan: Where is the main office?

Mr. Geldert: In Japan, I assume.

They are members, I might explain, because of their desire to operate under our trading rules. The Interstate Cottonseed Crushers' Association has a very complete system of trading rules and arbitration and has saved its members many millions of dollars in lawyers' fees and court fees, because all questions of differences between members are settled amicably among themselves through arbitration committees at all trading centers, and it has been very valuable to the industry—extremely valuable. There are many other industries which envy us. One of the very largest in this country the other day said if they had such a plan in their organization they could save millions of dollars for themselves.

Mr. Bryan: It all comes down to the fact that they are members of the association?

Mr. Geldert: They are members of the association, yes; and we are glad to have them.

Mr. Bryan: You say your understanding is that filled milk is only used for culinary purposes?

Mr. Geldert: That is our understanding.

Mr. Bryan: So if it should be the fact that filled milk is used for other purposes—for example, for the feeding of children—or used extensively as a substitute for whole milk, that might change your opinion, might it not, as to whether or not this bill should pass?

Mr. Geldert: I would not say that it was unhealthful for children. I have never gone into the subject, but on general principles I should say not.

Mr. Bryan: You are not an expert on dietetics, are you?

Mr. Geldert: No; I am not.

Mr. Bryan: So that if scientists should say it was, or if the preponderance of the testimony should be that it is lacking in essential nutriment, that might change your opinion?

Mr. Geldert: I might be largely influenced that way, so far as the feeding of young children is concerned.

Mr. Bryan: Yes; exactly. Now, you use the word "subterfuge" in connection with your statement?

Mr. Geldert: Yes, sir.

Mr. Bryan: That a subterfuge was being used in order to get this bill. Would you explain the nature of that subterfuge?

Mr. Geldert: I would not care to enter into any discussion of that at this time.

Mr. Bryan: You withdraw your charge then of a subterfuge?

Mr. Geldert: No; I do not.

Mr. Bryan: Then I ask the committee to request him to explain wherein the subterfuge lies.

Senator McKinley: I think the committee has no power to make them answer if they do not care to answer.

Mr. Bryan: I ask him to state wherein the subterfuge lies.

Mr. Geldert: I am not prepared to answer that at the moment.

Mr. Urion: I think there will be plenty of other witnesses who will satisfy the curiosity of the gentleman on that score.

Mr. Geldert: I simply made that statement, and I am not prepared at this time to answer the question.

Mr. Bryan: At the present time you decline to make any statement as to wherein the subterfuge lies?

Mr. Geldert: I say I am not prepared to answer at this time.

Mr. Urion: I understood you to say that you objected to this legislation on the broad grounds that it was class legislation, and one that ought not to be undertaken by Congress?

Mr. Geldert: I did.

Mr. Urion: Counsel for the Borden Co. seems to have aimed directly at you to show that you are actuated purely

by selfish interest, a manufacturing interest. Is that true? [fol. 514] Mr. Geldert: No, sir.

Mr. Urion: Upon the question of its being class legislation, would your views on that be emphasized and strengthened if it should be disclosed in the testimony which may be introduced hereafter that the prime mover in this legislation was a business competitor of Hebe, and that they were the ones who hatched and have nourished the legislation throughout, and that it is a pure and simple trade fight?

Mr. Geldert: I would not be surprised at all at anything that the dairy people might catch on to in their crazy idea of fighting cottonseed and other vegetable oils.

Mr. Bryan: You haven't a very high opinion of the dairy industry?

Mr. Geldert: I have a very high opinion of the dairy industry. It is one of the most useful and essential industries in this country.

Mr. Bryan: But you don't care for the people who are in it? Is that correct?

Mr. Geldert: The people who are attempting to direct their course are mistaken. They have gone way beyond all reasonable limits. Their methods are destructive and not constructive. If their time and efforts were devoted to building up their own industry, instead of attempting to tear down and destroy other industries, American agriculture would be greatly benefited.

Mr. Urion: Perhaps you haven't so high a regard for their lobbyists.

Mr. Bryan: I had not quite finished yet. Are you personally acquainted with their lobbyists, Mr. Geldert?

Mr. Geldert: I don't know any lobbyists.

Mr. Bryan: Are you a lobbyist yourself?

Mr. Geldert: No, sir.

Mr. Bryan: But you are lobbying now?

Mr. Geldert: No, sir.

Mr. Bryan: What is your definition of lobbying?

Mr. Geldert: My definition of lobbying is perhaps one that you would not like to hear.

Mr. Bryan: Go ahead.

Mr. Geldert: If you apply it to yourself.

Mr. Bryan: We have no objection to whatever the witness desires to say on that subject, Mr. Chairman.

Mr. Geldert: I think, Mr. Chairman, that it is beyond the mark. It has nothing to do with the subject.

Mr. Bryan: We will just take that as your answer. Was not cottonseed oil used at one time as a constituent of filled cheese?

Mr. Geldert: I believe it was, yes, sir; and it should be used again for the same purpose.

Mr. Bryan: You know that filled cheese has been regulated and excluded by legislation in a great many places?

Mr. Geldert: I do; very mistakenly.

Mr. Bryan: You know that the export of filled cheese has done a great deal for some time to close the European market to the American product? Is not that the fact?

Mr. Geldert: I don't know that that is true.

Mr. Bryan: You don't know that that is true? It has been stated, but you don't know whether it is true or not?

Mr. Geldert: No, sir.

Mr. Bryan: How much of your cottonseed oil was consumed in the export of filled cheese, which ruined the European market for American cheese?

Mr. Geldert: I don't think there was ever very much of it.

Mr. Bryan: You don't?

Mr. Geldert: No.

Mr. Bryan: Finally you have expressed yourself as to the principle involved in this legislation. Do you know it to be a fact that at least five States have passed similar statutes, that a number of other States have passed statutes that have practically the same effect that these and similar statutes have been sustained by the courts in every case in which the question has been agitated from the Supreme Court down to the State courts? Would those facts, as I say, have any influence on your judgment that this is class, pernicious, and undesirable legislation?

Mr. Geldert: None whatever. It simply illustrates the pernicious activity of the representatives of the dairy unions.

Mr. Bryan: So you don't approve of the Supreme Court decision on that point? You don't agree with that?

Mr. Geldert: I won't say that; no. I will simply say that the Supreme Court decision, whatever it was, was based on points of law, and I am not advised that they ever went into the scientific side of it at all.

Mr. Bryan: You are not aware of the fact that the Supreme Court had before it at the time they decided that case all of the scientific testimony which you say you are not familiar with?

Mr. Gildert? Well, I am more or less familiar with it.

Mr. Bryan: Furthermore, have you read the recent opinion of the Supreme Court of Wisconsin on this general subject?

Mr. Geldert: I have not read it, I am frank to say. I have seen references to it, but have not read it carefully.

Mr. Bryan: You have not read the Supreme Court's comment with reference to this legislation?

Mr. Geldert: I have not read the Wisconsin decision yet, but I have it on my desk.

Mr. Bryan: I recommend you read it.

Mr. Geldert: I will at the first opportunity.

Mr. Jackman: Let me ask you if you are familiar with the decision of the Supreme Court of the United States and the finding of fact that Hebe is a wholesome food product and that the statement that the legislation was sustained simply on the ground that it might be an instrument of fraud and delusion?

Mr. Geldert: Yes, sir.

Mr. Bryan: Have you read the Supreme Court decision?

Mr. Geldert: I have read it; yes, sir.

Mr. Bryan: Do you remember all the points involved in the decision?

Mr. Geldert: I don't think I can remember all the points. I am not a lawyer.

Mr. Urion: Mr. Chairman, I would like now to be permitted, as counsel for the Hebe Co., to make a statement for the record.

Statement of Mr. Alfred R. Urion, Attorney at Law, Washington, D. C.

Mr. Urion: It is the belief of the Hebe Co., and we expect testimony will be introduced before this committee to show, that this legislation is the result of a conspiracy entered into as far back as the early part of 1920, fostered by an opponent of the Hebe Co.—to be plain, the Borden Co.—and that the interests which are actively prosecuting the passage of the Fordney bill are actuated by the most selfish trade interest. Their cause has been actively furthered by

the widespread circulation of false and misleading propaganda, shrewdly calculated to legislate the milk compound industry and the Hebe Co. out of business.

The instigators of this legislation mask their real purpose and their mercenary motives behind a specious claim of danger to public health through the inadvertent feeding of milk compound to babies. The real purpose behind the fight to put milk compounds out of business is not the "protection of public health," but it is really a short and easy way to eliminate competition.

This is most vicious legislation and strikes at the very roots of business, for, if successful, it would, in fact, legalize the suppression of a minor by a major industry and establish a dangerous precedent the economic effect of which would be beyond present conjecture.

Mr. Bryan: You are reading from a pamphlet printed by the Hebe Co.?

Mr. Urion: I am reading from a pamphlet, yes, sir; and that pamphlet will go into the record, and a lot more besides.

Now, in the hearing before the House committee, Mr. Engels, an official of the Borden Co., upon being pressed, said:

"The Borden Co. wishes to go on record before this committee as being in favor of legislation which will regulate or prohibit the sale of these milk compounds, because it is the most unfair kind of competition among the milk manufacturers. If Congress or the several States do not do something to stop this competition, our company may be compelled as a matter of necessity, to meet this competition, to go into the manufacture of it."

Mr. Bryan: Would you mind reading the rest of that passage, Mr. Urion—I mean from the testimony and not from the pamphlet.

Mr. Urion: You can put that in when you get to it. I am reading what is pertinent and germane.

[fol. 515]. Mr. Bryan: I say for the record that is a garbled, incomplete, misleading excerpt from Mr. Engel's testiomny which should be fully cleared up and will be cleared up if the entire passage is read.

Mr. Urion: Will you take the floor?

Mr. Bryan: I will read the passage if the committee wishes to hear it.

Mr. Urion: I haven't it in this pamphlet. The record will go in before the subcommittee.

Now, further than that, I want to call your attention—and I am sorry the other members of the committee are not here—to the adroitness and cleverness with which this bill was prepared under the guiding hand of Borden's counsel and those interested in the propaganda to suppress the Hebe product.

"The term 'filled milk' means any milk, cream, or skimmed milk which has been blended or compounded with any fat other than milk fats so that the resulting product is in imitation or semblance of milk, cream," etc.

We shall produce before this committee perhaps a half dozen products that are made entirely out of skimmed milk, and they are exempt under this definition; and yet the testimony before this committee and before the committee of the House was that all of vitamines A—whatever that is—are taken out of the skimmed milk, and thus, when the babies drank it—and it must have been fed to them in hogshead size—they lacked the necessary vitamines to sustain life. We will show that the Borden people themselves put upon the market a product called chocolate malted milk in which there is no chocolate; but it is colored with cocoa, which is the refuse of chocolate, so that it takes it out from under this bill, because everybody knows that chocolate is not in semblance or imitation of milk, and yet that it contains less fats than is required under the pure food laws of the United States. It is not in semblance of milk, but it is just skimmed milk with a little cocoa, the refuse of chocolate—as Mr. Voigt himself said in his testimony before this committee—added, and yet that product can be sold under this bill. So can all of the other desiccated and dried skimmed milks; and there are many of them on the market, as we will show you.

The bill further says, "Any fat or oil other than milk fats." Why did they limit it to that? To get Hebe off the market.

You will recall that a Mr. Gerstenberger, I think his name is, of Cleveland, who represents a baby food called "S. M. A.," came and said they had made peace with the proponents of this bill—I think upon the questioning of the

chairman himself—because it was to be sold in drug stores and would not be sold on grocery shelves; it would be sold in places where paragoric and other quieting stuffs for babies and children are sold. They made peace, and yet they had in that fats and oils other than milk fats; and yet he said to you, in answer to your question, that they had agreed with the proponents—that is, with the attorney for the Borden Co. and with this young prince of lobbyists for the milk producers' association, that they might get under the wire.

Mr. Bryan: I ask Mr. Urion if he would nominate himself as the king of lobbyists?

Mr. Urion: I will answer that before I get through, and I will define what a lobbyist is, too.

Mr. Bryan: All right, sir.

Mr. Urion: It is one that has access to and gets the original records from committees and takes them around the country in his propaganda work.

Mr. Bryan: That is your definition?

Mr. Urion: It is.

With all the testimony that is before the House committee on this bill—and by the way, this bill, H. R. 8086, was substituted for the original Voigt bill, which seemed to me to be a proper method of regulation, which was an amendment to the pure-food law—all of the testimony by the scientific men produced even by the proponents of this bill showed that the ingredients of Hebe—skimmed milk and coconut fat—were both healthful, nutritious articles of food; and yet, upon the floor of the House, with no word of testimony to support it, but, on the contrary, every iota of evidence showed that it was not a deleterious article of food but that it was a wholesome, healthful food, this bill was amended by adding the words "and as such is an adulterated and deleterious article of food, and when marketed as such constitutes a fraud upon the public."

I want to read, going back to the Bordens again, an editorial in the New York Commercial, which is a trade paper published in New York City:

"The Borden Co. confesses. Not with any idea of helping any particular concern, but as a matter of truth and justice, the New York Commercial has steadily opposed the legislation sought in the various States, and now in Congress, to prohibit the use of so-called filled milk. This com-

pound is made up of about 92 to 94 per cent skimmed milk, to which has been added 6 or 8 per cent vegetable fat, usually coconut oil."

In many instances, however, it is peanut oil.

"It is a wholesome product. It has been approved by the New York board of health, by the Department of Agriculture, and the United States Bureau of Chemistry, and other authorities. It is intended for use in baking and cooking, and is so labeled, with the additional legend that it is not to be used for infants' food.

"Nevertheless, there has been a tremendous campaign waged against it, and a bill, known as the Voigt bill, has passed the House and is now before the Senate for action. The bill makes the declaration that 'these products are adulterated and deleterious articles of food.' Laws can not alter facts, and even if the law says these products are adulterated and deleterious articles of food, that does not make them so.

"We have insisted all along that there was some ulterior purpose behind this attempted legislation, which could only be an effort to stifle competition. We have hinted that the large condensed-milk interests were at the back of it, and our information was that the Borden people were doing everything they could to put these competitors out of business. We do not expect the Borden Co. to come out flat-footed and say so, however, but that is exactly what they have done. The official record of the hearing before the House committee contains the following:

"'The Borden Co. wishes to go on record before this committee as being in favor of legislation which will regulate or prohibit the sale of milk compounds * * * because it is the most unfair kind of competition among the milk manufacturers. * * * If Congress or the several States do not do something to stop this competition, our company may be compelled, as a matter of necessity to meet competition, to go into the manufacture of it.'"

Bear in mind now about this chocolate malted milk, which was then already and had been for a long time on the market, but the bill was so camouflaged that it was not included.

"What the ordinary observer would like to know is why Congress should exert itself to pull the Borden Co.'s chest-

nuts out of the fire. If it is an adulterated and deleterious article of food, then how can the Borden Co. justify its present virtuous attitude by the announcement that it will itself enter into the manufacture of this same adulterated and deleterious article of food? The Borden Co. sells the Eagle Brand of condensed milk, which has a deserved reputation as a wholesome article of food. It is composed of approximately 60 per cent of milk and 40 per cent cane sugar."

As a matter of fact, it contains 42 per cent of cane sugar.

"It is a combination of milk and sugar. No one has ever questioned the wholesomeness of milk and sugar, either separately or in combination. Filled milk is a combination, as already stated, of skimmed milk and coconut oil. No one questions the wholesomeness of either of these. Why, then, should the Borden Co. expect Congress to allow it to combine certain wholesome ingredients while denying a similar right to a competitor? It is not the function of Congress to take part in trade wars that do no harm to the public.

"It is doubtful if the courts would sustain the law if it were passed. The law would be stating that which was not true as a basis for the existence of the law itself. The law would in fact be predicated on a lie, for a lie is a false statement with intent to deceive. Those who added the amendment that the product was an adulterated and deleterious article of food knew that they were making a false statement with intent to deceive. No amount of statute law can alter or amend the natural law. Chemistry is an exact science. It is natural law. If the combination of skimmed milk and coconut oil produces no chemical change in these ingredients one time, it will not at another, and unless there is a chemical change the combination can not be harmful, because the ingredients themselves are harmless. The courts will not uphold a lie, even if Congress tells it."

Senator, you were not here when I started to read this editorial from the New York Commercial of Friday, July 7. The New York Commercial is a trade paper which has referred to the fact that a trade war exists between the Borden [fol. 516] Co. and the Hebe Co., and I made some statement in the record which you may refer to, in which we charge that it is a trade fight, and that a smoke screen has been thrown about on the baby question so that Congress may see its way clear to pass the law.

I want to say something now about Borden's Eagle brand of condensed milk. It contains 42 per cent of sugar.

Mr. Bryan: Mr. Chairman, may I interrupt? The Borden Co. does not object a bit in the world to this discussion, but is it relevant to the present inquiry?

Mr. Urion: It is relevant to the present inquiry, because we propose to take up and show——

Senator Kendrick: I think the witness ought to be allowed to go ahead.

Mr. Urion (continuing): That it is filled milk; that it is not filled with the fats from milk. We are going to show also that when cane sugar gets into the human intestine it generates alcohol. The charge has been made that we are poisoning babies because this product of ours does not contain vitamine A; it merely lacks this one ingredient; and yet if it shall be established that cane sugar introduced into the upper intestine produces alcohol, how much more dangerous it is to feed the Eagle brand of milk to babies, and it is a food that is used for baby feed.

Furthermore, we expect to show by scientific men that the question of vitamines in whole milk varies according to the feed of the cow; that in the wintertime whole milk does not contain any more vitamines than skimmed milk does in the summertime. It is already in the record to some extent that all of vitamine A is not taken from skimmed milk, but that about 50 per cent of it, so far as the scientists are able to discover, still remains in skimmed milk.

Senator Kendrick, in your absence I called attention to the fact, if I may divert for a moment, to the adroitness with which this Voigt bill is drawn. It refers to any milk, cream, or skimmed milk which has been blended or compounded with any fats or oils other than milk fats so that the resultant product is in imitation or semblance of milk, cream, etc. I made the statement that there are at least a half dozen canned-milk products on the market which are made wholly of skimmed milk. Some of them have sugar added. Some few others—I believe this product that is manufactured in Cleveland, which has passed the muster of the pro-onents of this bill, the Borden interests, and the milk producers' association, has cod-liver oil in it. Those skimmed-milk products do not come within the purview of this bill. In fact, it is so drawn that they do not come within it. Certain skimmed milk products, of which there are a number upon

the market, do not come within the purview of this bill. Neither does this chocolate malted milk which is put out by the Bordens, which is skimmed milk, a little sugar, and no chocolate, but cocoa shells, colored with cocoa shells, which gives it a brown color and takes it out from under the purview of this bill. It is also recommended for the feeding of infants and children, and we shall produce before the committee this afternoon or at some later date the advertising matter which is put up in the grocery stores lauding this product. It is very carefully kept out of this bill.

We charge, and we shall be able to support it, I believe, by testimony, before the hearing is completed, that this is, as stated by the witness who preceded me, class and sectional legislation. Second, we shall show that it is sponsored by certain organized dairy interests, backed by the Borden Co., for their own selfish gains at the consumers' expense.

We shall show that the real purpose behind the bill is an attempt to destroy competition; that Congress is asked to legislate in favor of one manufacturer against the interests of another in a trade war that is waging; that it is a trick engineered by a powerful lobby to get Congress to step in and protect one industry by destroying another; that it is unwarranted interference with business; that it is an attempt on the part of the proponents of the bill to put the Government in the business of putting a legitimate business out of business, to aid another; that it deprives hundreds of thousands of families of a nutritious, wholesome, and economical food product; that it deprives the farmer of a legitimate market for an important dairy product—skimmed milk.

This committee had produced before it by the proponents of this bill, or at least by the attorney representing the Borden interests, a certain label which is not the label in use by the Hebe product. They evidently got them from some old stock. It is a label once used, but they evidently went into a shop and got a shop-worn can of Hebe that they might show to this committee. That label was then used, but it was changed after conference with the pure food department of the Department of Agriculture, the committee bearing in mind that Hebe has been approved as a healthful, nutritious food product by the chemical bureau of the pure-food department of the Department of Agriculture of the United States, and the label which they use has been approved.

Now, this label which is upon the can of Hebe says in large red letters, "A compound of evaporated skimmed milk and vegetable fat. Contains 7.8 per cent vegetable fat, 25.5 per cent total solids. For cooking and baking. Do not use in place of milk for infants."

On the other side—two sides of the can—"For cooking and baking. Do not use in place of milk for infants."

I wish to have this label put into the record, because the one that is in the record is not the right one and is part of that propaganda of deceit that has been practiced for more than two years to put Hebe out of business.

Mr. Bryan: What is the date of adoption of that label, Mr. Urion?

Mr. Urion: That I don't know.

Mr. Jackson: 1920. Two years ago.

(The label referred to contains the following:)

"Net contents 1 lb. avoirdupois. Hebe: A compound of evaporated skimmed milk and vegetable fat. Contains 7.8 per cent vegetable fat, 25.5 per cent total solids. The Hebe Co. Offices: Chicago; Seattle, U. S. A. For cooking and baking. Do not use in place of milk for infants."

Mr. Urion: Now, the charge is made that the ignorant women who use this product can not read that or they would not pay any attention to that; that they would feed it to the babies anyway, and therefore poison them. I think the scientific experts for the proponents of the bill themselves say that it is a wholesome article of food, and some of them go so far as to say—some of the scientists—that it can be and has been fed to infants with profit to their health; but we expect to produce before this committee practically all, so far as we are able to, of the canned-milk products, the dried or desiccated milk, whole milk, milk that has been colored by something to take it out of the purview of this bill, desiccated milk, skimmed milk, and we shall show that upon every one of them and upon every baby food that comes out are minute directions as to feeding, because none of them can be fed whole.

Take this Borden product, the Eagle brand milk, which contains 42 per cent of cane sugar, which generates an alcohol in the upper intestine of the infant. That has minute directions in fine print, and we will show you, going down the whole side of the can, saying "You must take a half

teaspoonful or teaspoonful—whatever it may be—of this product, and you must dilute it with so much water. You must not feed it whole."

They say that does not deceive the poor ignorant women. They can read that, but they can not read this great big print in plain English, "Don't feed to infants and children."

I am outlining, Mr. Chairman and gentlemen of the committee, some of the things we expect to show, and I venture the assertion that if this committee, when the record is complete, does its full duty, it will report to the Senate in such a manner that the Senate will pass a resolution sending the record to the Federal Trade Commission with instructions to investigate what we here charge and now charge as a conspiracy fostered and fathered and financed by a competitor, which comes clearly within the unfair practice act; and then if the Federal Trade Commission does its full duty a Federal grand jury will have something to investigate on indictments for conspiracy. I am talking plain English this morning, Mr. Chairman and gentlemen of the committee, because there has been so much fraud and deceit practiced not only upon the House of Representatives but sought to be practiced upon the Senate of the United States, practiced upon the women's organizations throughout the country, and they are only now beginning to wake up to the fact that they have been deceived, and I repeat that when this record is closed it will show a state of affairs in the preparation of this bill, in the effort to make it a law, that I venture to say has never yet been before Congress.

Now, as to the dairy interests being unanimous in wanting this legislation, an I everybody crying for it, I want to read an editorial from Hoard's Dairyman, of Wisconsin. Everybody in the dairy business and on the farm knows what Hoard's Dairyman is and what it stands for. Hoard's Dairyman has an editorial on the Voigt filled milk bill in which he states they have been criti-zed by some man, named Robert F. Brinton—and I do not know who he is—that they have not stood for the Voigt bill, and the editorial—and, [fol. 517] by the way, this publication has upon its staff of contributing editors Professor McCollum, of Johns Hopkins University—

Senator McKinley: Mr. Urion, would it not be just as well to put it in the record?

Mr. Urion: Well, Mr. Chairman, I would like, if I might, to read not all of it, but I will read just the salient points, and then put it in. I do not want to tire the committee. But this is the first time in two years of propaganda, of the meanest kind of commercial propaganda, that we have had the opportunity to be heard publicly, and that I offer as my apology for asking that we get as much into the record as possible.

Senator McKinley: You can put it all in the record.

Mr. Urion: He says:

"We favor a bill that would levy a Federal tax on filled milk and license the dealers and manufacturers. Such a law would give every State protection and each State would still have the right to enact a prohibitory law. It is our opinion that if we are to ask Congress to enact a law for the purpose of controlling the fraud and deception in filled milk, that it ought to be of help to every State. Otherwise, why expend the effort to secure it.

"Since its inception Hoard's Dairyman has fought to regulate and suppress the fraud in connection with dairy substitutes. We assisted in securing the enactment of the Federal filled cheese law which taxes filled cheese and licenses dealers and manufacturers. This product is not manufactured now. We also assisted in securing the enactment of the Wisconsin filled cheese law which prohibits the manufacture and sale of filled cheese within that State.

"We had a prominent part in getting Congress to enact the Federal oleomargarine law, which taxes white oleomargarine one-fourth cent per pound, and oleomargarine colored in semblance of yellow butter 10 cents per pound. We assisted Wisconsin in securing a law which prohibits the sale of yellow oleomargarine within that State.

"Would this record indicate or could it be interpreted to mean by any fairminded man that we do not favor filled milk legislation?

"Our long experience in securing legislation to govern and suppress the fraud in so-called dairy substitutes has led us to the deep conviction that the taxing power of the Federal Government should be used. The Voigt bill gives no protection to States having prohibitory laws, or to States not having prohibitory laws. It provides no department of government to enforce it."

Now, here is what I want particularly to call your attention to. This emphasizes the statement I made of the propaganda of deception and deceit that has been behind this Voigt bill from its very inception.

"Mr. Brenton states: 'The dairy interests of the United States were all invited to the conference held at St. Paul during the dairy show last October.' In this he is mistaken. No representative meeting of the national dairy interests was called. The conference to which Mr. Brenton refers was attended by 30 or 40 men who were attending the dairy show and were brought together on a moment's notice. It was by no means a representative meeting. In September, 1921, we asked one of the officers of the National Milk Producers Association to call a representative meeting of the dairy industry for the purpose of determining what kind of national legislation should be agreed upon, but this officer did not see fit to follow our request."

Probably the Bordens would not let him.

"After the show was on, however, a few men were called together to discuss the filled milk bills now before Congress. Mr. Brenton forgets that the National Holstein-Friesian Association of America was in session and about 600 members present, and it unanimously passed a resolution favoring the Fordney bill which proposes to tax filled milk. This was the largest representative meeting, so far as we know, held at St. Paul during the dairy show."

Mr. Holman: What association was that you just referred to?

Mr. Urion: The Holstein-Friesian Association.

Mr. Holman: I have filed in the record a letter from the Holstein-Friesian Association indorsing the Voigt bill.

Mr. Urion: I suppose that was propaganda, which is all right, only we want to meet it.

If the chairman will bear with me a little, I have not my data all together. I have rather expected, as I said, that Doctor McCollum would occupy the day, and I have not my data in the order it should have been in for to-day, and would have been in had I known we were to go forward at once.

Mr. Bryan: Do you want to recall Doctor McCollum as your witness, Mr. Urion?

Mr. Urion. Oh, no; we are perfectly willing to leave him to you. We will take care of it when we get to it.

I would like to read you what Mr. Voigt has to say about this poisonous and terrible stuff that poisons babies. Mr. Voigt says:

"I will say to you gentlemen that there is nothing poisonous or deleterious in this milk compound. I will say further I do not object to what this compound contains so much as I object to what it does not contain."

He is referring to vitamine A.

"The fact is that the article is not deleterious, nor is it poisonous, and any statement that it is does not meet the argument. You can mix milk with water and there is nothing injurious or poisonous about it, and it may not be a fraud upon the public, but it is considered everywhere in the country to do so is a fraud on the public."

Mr. Bryan: What page are you reading from?

Mr. Urion: I am reading from page 11 of the hearings, Series H, part 1, Filled Milk.

Of course, everybody know that wheat flour has no vitamine A in it; it has not any of the vitamines in it. Scientists have shown that; and Doctor McCollum, I think stated that—exhibited a table that showed it. Yet no one for a minute wants to legislate against white wheat flour because it does not contain the vitamines, yet they do want to legislate against a food which had in it skimmed milk, with perhaps 50 per cent of vitamine A and the other vitamines in it, and that has got bone building power, has got vegetable fat. Why? Because there is a trade fight on and we are for the Bordens; we are not for Hebe.

Doctor McCollum says:

"Our national dietetic sin is living too much on wheat flour, on bread made from it, and other cereals having similar dietetic properties; on tubers, such as the potato and sweet potato; and on meats. That type of diet has never succeeded with any class of human beings; it will not succeed to-day and never will."

Of course, I suppose if you would feed babies on Hebe every time they squalled for something to eat there might something happen to them, and, of course, that would be

so with Eagle brand too, with its 42 per cent of cane sugar in it.

It might generate more alcohol. I don't suppose the women of the country ever thought of this generation of alcohol in the upper intestine of the stomach, in the feeding of babies, as just as deleterious to them as it would be to feed this healthful product that has not any vitamine A in it, or very little.

I want to go back again now, if I may, to this propaganda of misstatement, deception, and deceit.

I hold before me a pamphlet which shows 10 reasons why Congress should pass the Voigt bill, by Charles W. Holman, executive secretary of the National Milk Producers' Federation.

"Eleven States that barred filled milk within their borders—Ohio, Wisconsin, California, Colorado, Oregon, New York, New Jersey, Utah, Maryland, Florida, Connecticut."

I charge that is an untruthful statement, and when we get Mr. Holman on the stand we are going to ask him for his authority on it. There are only 3 States of the 11 that prohibit it.

Mr. Bryan: Do you include Maryland in that?

Mr. Jackman: Direct legislation on the subject.

Mr. Bryan: Prohibit.

Mr. Urion: This says "bar." "Bar" means to prohibit. "Eleven States that bar filled milk within their borders." Of the 11 States there are but 3, namely, Wisconsin, New Jersey, and New York. That is the kind of stuff they put out.

Mr. Bryan: I charge Mr. Urion with making an absolutely misleading statement.

Senator McKinley: Let him go ahead and make them. You can make yours later.

Mr. Urion: You may correct them when the time comes.

Senator Kendrick: You will have a chance to rebut the statement.

[fol. 518] Mr. Bryan: When the statement is read I want to call attention to the misrepresentation. I do not want to let is go unchallenged.

Mr. Urion: I want the record to show I am stating this upon information, but we make the reservation that we will bring the laws and put them into the record to show

you exactly what States bar—b-a-r—filled milk within their borders. That does not mean regulation. We are not objecting to regulation; but it is that adroit, that foxy, that crafty way of misleading that has been going on here for two years to destroy this product, and it is fostered and fathered by a trade competitor and camouflaged so as to ask Congress to pass a law that would drive them out of business.

I would like to read to this committee what some of the newspapers of the country think about it.

Mr. Miller: May I ask you a question?

Mr. Urion: Yes, sir.

Mr. Miller: Would you suggest that the Supreme Court of the State of Wisconsin was also indulging in misleading propaganda?

Mr. Urion: I would say that the decision of the supreme court in the dictum of that decision goes outside of the record that was introduced in the trial of that case to a very large extent, and when it goes into the facts the court does not know what it was talking about, or the judge who wrote that did not know. We are going to introduce it before this committee in order that the committee may see it. The latter part of the opinion bears the imprint of some other hand, because it goes outside of the record.

We are here to call a spade a spade and to pool our assertions before we get through.

Mr. Bryan: We have as big a spade as you have, and we are going to use it.

Mr. Urion: You have been using it for two years.

Mr. Bryan: It was not the spade we were using. It was some——

Senator McKinley: I think we had better let Mr. Urion go ahead.

Senator Kendrick: Mr. Chairman, I suggest that the witness be allowed to proceed in his own way and that he be requested to just give us the important points in these newspaper articles and make it as brief as possible, even if he wants to put the articles in the record.

Senator McKinley: Mr. Urion, Senator Kendrick suggests that you go right along, but that you just make your important points, and then if you want to put newspaper articles in the record, why, do so.

Mr. Urion: Very well, sir. I will be glad to accede to the wishes of the committee.

Mr. Chairman and gentlemen of the committee, I am somewhat embarrassed by the fact that we have not all our stuff here in which to outline this matter, because, as I say, we did not expect to be forced to go ahead here to-day, rather expecting Doctor McCollum and some of the other witnesses to be recalled to occupy the day. I don't know what our recess for luncheon will be, but— —

Senator McKinley: I think the committee is perfectly willing to go right along until 1 o'clock.

Mr. Bryan: I might make just a very brief reply.

Senator McKinley: Have you concluded, Mr. Urion?

Mr. Urion: There will be ample time given to reply, will there not? I have been denied the privilege of examination of Doctor McCollum until we have made our case.

Senator McKinley: I don't know whether there are any lawyers on this committee. We are all farmers.

Mr. Bryan: When I say brief, I mean 10 minutes.

Senator Kendrick: I suggest, Mr. Chairman, that the witness proceed with such testimony as he has at this time until he has concluded, and then if the opposition to the bill has any other witnesses they should be called during the time that we can give them. Those who favor the bill will have their chance at rebuttal after these witnesses have finished. That would be my suggestion.

Mr. Urion: We will call a witness, and later in the day, when I have before me the stuff which we did not bring down, perhaps I will be accorded the courtesy of going on further?

Senator McKinley: Yes, sir.

Mr. Urion: We would like to call Dr. Joseph Brennemann, chief of the medical department of the Children's Memorial Hospital of Chicago.

Mr. Jackman: Mr. Chairman, may I ask if it is the practice of this committee to have the witness make his own statement as an expert, or the practice which was followed by the proponents of this bill to suggest to the doctor various things properly to be brought before this committee?

Senator McKinley: I should think he had better go ahead and make his own statement.

Senator Ladd: I should think so, and then if they want to ask any questions afterwards they can. We are wasting too much time.

Statement of Dr. Joseph Brennemann, Chief Medical Department of the Children's Memorial Hospital, Chicago, Ill.

Doctor Brennemann: As I understand it, I have been asked to come here as a practicing physician and as a specialist in diseases of children to say what I think about filled milk especially. Now, I ought to preface that, perhaps, by a few remarks about milk. In the first place milk in itself is not a perfect food. It is perhaps a perfect food for young animals of each species. For instance, human milk is perfect food for a baby; cow's milk is perfect food for a calf, and so forth. That is, they are not absolutely interchangeable. Everyone knows that milk is not a perfect food under all circumstances, because there are certain things that a young baby coming into the world has to have in order to make milk a perfect food. That will apply for adults. For children milk is not a complete food. It has very high supplemental value as a food, but it is not a complete food. It does, however, contain all of the essential elements that go into a food, but not in sufficient proportions, and so forth, for proper nutrition. What about filled milk? Filled milk, of course, is condensed milk. The milk we are considering here is a milk from which the fat has been taken, so that we have skimmed milk, and this is condensed to about half of its volume; and then, as I understand it, about 7 or 8 or 9 per cent of a vegetable oil is added to that. What about that as a food? What about its food value from the standpoint from which we are considering it here?

It ought, perhaps, to be considered from several standpoints. In the first place, as to its chemical composition; secondly, as to its vitamine content; thirdly, how does it impress us as a food, and, perhaps, lastly the bearing which extensive advertising and wrong advertising would have upon such a food.

We know that any animal requires from a chemical standpoint, five food elements—fats, carbohydrates, protein, salts, and water. Those are absolutely essential. They are just as essential as any vitamine is. Every one of those is necessary except that the fat and the protein can more or less replace one another. To what extent that it true has not yet been definitely ascertained. It is probable that an animal can get along fairly well without fat. It prob-

ably would be somewhat to its detriment. An animal can get along if its protein is replaced by fat. It is not, of course, the easiest way to do it. It is a question of whether it should be done. Take a milk like Hebe, for instance. The only thing that is not in it is the butter fat which is taken out and is replaced by another fat. Butter fat is probably no more digestible, no more valuable to an animal, than is coconut oil, except in one particular, and that is in its content of what is now known as fat soluble A, so that practically all of the chemical substances that are necessary for nutrition of an animal occur in milk, although they may not be in perhaps the proper proportions, or of the proper kind with the exception of this certain vitamine A.

Taking the question up, then, from the second point, the vital or biological standpoint, may I assume that the gentlemen of the committee know all about vitamines?

Mr. Jackman: They do not. I do not believe you should assume that.

Mr. Breitenmann: Perhaps it would be just as well to briefly emphasize that point again.

Formerly we thought that all that was necessary for the complete nourishment of an animal was that it should have the proper amount of fat, protein, carbohydrates, salts of the right sort, and water. On account of the very brilliant work that has been done, especially since 1907 and 1908, or somewhere in there, first, perhaps, by Bjkman, later by Funk, especially by McCollum, and by Osborne, and others, and on the purely physical side by Hess, Mellenby, and others, as a result of that we have very much enriched our [fol. 519] ideas of what constitutes a necessary or a complete food for an animal. I need not go into details about that at all, except to say that there are at least three necessary substances which if not present produce deleterious influences in most animals, but not in all. We know perhaps least of the human being with reference to those things. There is possibly a fourth which is about to be announced, or has been announced, which is still uncertain, and which we need not say very much about.

Assuming that all of these things—it is not absolutely necessarily assumable, but assuming that all of these things are necessary for the human being, how does filled milk stack up in this respect? Taking up the vitamines in order;

first, fat soluble A: Fat soluble A, associated with—or that Doctor McCollum has spoken of here especially as growth-promoting vitamine, and also as a vitamine the absence of which produces a peculiar eye disease in rats. We know now that the growth-promoting idea was not exactly a well chosen one. Every vitamine is probably necessary for growth, not only for the young animal, but for the well-being of the adult, for the function of reproduction, etc. They probably are all necessary; and one might expand that further and say that every one of the chemical constituents is necessary. Protein is absolutely essential. An animal dies if he does not get it.

The salts are just as important.

So that it is proper to say that every one contains some growth-promoting factor, especially inasmuch as we know that vitamine B is almost as important.

It is, however, known that a young rat, for instance, will not develop, will be unable to reproduce, etc., if vitamine A is not sufficiently present in its food. Vitamine A is found in butter fat very conspicuously. It is found in leafy vegetables. It is found almost in every other fat. It is very, very widely distributed in food, so that adults or older children need have no fear of not getting enough of vitamine A. It is especially abundant in cod-liver oil. It has been said that cod-liver oil contains 250 times as much as butter fat. Whether that is true remains to be determined, because those experiments are not very definite.

Then if the vitamine is absent from the diet of a young rat, within a certain number of weeks that young rat develops a certain eye disease which ultimately results in blindness and death of the rat.

So much for the presence and distribution, etc., of vitamine A. What about it especially with reference to human beings, and especially with reference to filled milk? Filled milk does not contain butter fat. Coconut oil is at most supposed to contain only traces of vitamine A. Those things are indefinite. Some people say traces. Some people say none. The limits of experimentation are too hard to make that out.

We may say, then, that if vitamine A is a fat soluble—and it has been named fat soluble A—if it is a fat soluble substance one would say inasmuch as coconut oil does not contain it, that a preparation like Hebe, for instance, was

deficient in fat soluble A. That is rather a hard question again to decide definitely. Unfortunately, it can not be decided in experimental animals entirely, because what applies to experimental animals naturally does not apply to humans. What applies to rats does not apply to guinea pigs, and what applies to guinea pigs does not apply to rats. We can not give a rat scurvy, for instance. So that makes a lot of difference. It is difficult to apply laboratory experiments in practice.

What about vitamine A, however, in preparations like, say, Hebe, like a filled milk? We don't know, in the first place, how much vitamine A is necessary. Hopkins some years ago, said that two cc. to a rat was enough to prevent xeropthalmia. Whether that is true or not we do not know. An important question again, is, first: Is there any fat soluble A in skimmed milk? I am not talking of it as a nutrition expert. I am taking their statements and applying them. We have the statement of McCollum, which requires confirmation—it was made five or six years ago, and perhaps rather roughly at that time—that approximately, say, half of the fat soluble A was contained in skimmed milk. Hopkins has more recently made a statement in which he says he is more and more convinced that there is more fat soluble A in skimmed milk than its natural content, which is almost nothing, would lead one to think. Therefore, it is rather probable that fat soluble A is also perhaps partly water soluble.

I am making the statement not as a physiological chemist, but as it would seem to a man up a tree with reference to things of that sort. If that is so, then of course if half of it is contained in the skimmed milk, and a preparation like Hebe, for instance, contains all of the skimmed milk, then of course it contains all of the fat soluble A, and fat soluble A is relatively little influenced by the manipulations that are necessary to the production of a filled milk. That is, it is thermostable; it is not much influenced by heat. It is influenced by heat in the presence of an alkali, etc., but otherwise not so.

Another point along this same line: Hess, of New York, some time ago—Hess has an institution in which he can legitimately do experimental work on babies much comparable to the work that some of these men have been doing on white rats, guinea pigs, etc. I don't mean experimental

work in the sense of his ever doing any harm to a baby, because if there is the slightest suggestion of harm it can be immediately changed. But he has a wonderful orphan asylum in which these cases can be studied. He has often kept a number of babies five or six months on skimmed milk and a vegetable oil and proper salts, water, and cod-liver oil. There was a time when we were very much afraid of feeding any cow's milk. We are still. We know that certain nutrition experts were doubtful about fat as a digestible substance. There was a time when we were very much afraid about feeding much fat to babies. At that time we used to take all the fat out and give them skimmed milk, and it worked so well we used to keep babies for months on skimmed milk. We saw them grow and thrive and do just as well as though they were fed on the fat. I do not say that should always be done. I am talking as an expert on diseases of children. We have done those things and they got along during a long period of time, not comparable to the third of the span of life of a rat or anything of that sort, but we saw no harm from it. Hess said as a result of feeding skimmed milk that infants needed very little fat soluble A. In his recent book, McCollum, I think, has taken Hess to task for that by saying, "You are not feeding your infants a food deficient in fat soluble A," because, as McCollum has said before, the skimmed milk contains half of the fat soluble A and, of course, the preparation that we are considering at the present time contains all of the skimmed milk of cow's milk.

If, then, Hess's babies could get along perfectly well on skimmed milk with the vitamine A which it contains, it would be hard to see why babies should not get along on a skimmed milk which has been evaporated, to say nothing about what the rest of the food is that is contained in it.

As far as vitamine A is concerned itself, any milk compound is deficient at least in fat soluble A. To what extent the skimmed milk carries enough for ordinary babies remains to be determined, because apparently there are very different opinions with reference to that, and certainly some of the opinions that I have heard expressed do not correspond with the experience that we have had in connection with infant feeding.

What about vitamine B in connection with this? This can be dismissed very briefly.

I must go back one moment with reference to what I spoke of a moment ago. The only characteristic thing that you can put your finger on with reference to vitamine A is the presence of distinct xerophthalmia in rats. To what extent does that occur among humans? I have never seen a case that I have recognized as such. I saw a child recently that perhaps had something like that that was on a frightfully deficient diet in many other ways. But our information concerning this only goes back to 1907 as a disease which occurs in seriously impaired nutritional dieting or in infants that are seriously impaired nutritionally. He however, traced it to an excessive starch diet, rather than these other things.

Personally I have never seen xerophthalmia produced in infants. That again is evident from the work of Groff and others. But xerophthalmia as a disease seems to be a very trifling menace under any circumstances.

As far as vitamine B is concerned, it is sometimes spoken of as the antineurotic vitamine. This vitamine was one of the earliest ones definitely determined upon in connection with which the work of Funk is important. It is spoken of as the antineurotic vitamine because it has to do with the nervous system. That word "antineurotic" is just as unfortunately chosen as the words "growth promoting" in connection with the other. As a matter of fact it does not simply produce paralysis. It produces a general effect. I had recently a very interesting hour with Professor Jose, the chief of staff of the University of Manila, Philippine Islands. There the mortality of infants used to be 49 per cent. Now it is 18 per cent. Why? Because they found out what vitamine B really meant in the nutrition of infants and mothers, and those infants died not from a paralysis but from a dilatation of the heart. They all had very [fol. 520] large hearts, as he expressed it, very graphically, and they died very quickly. A very interesting thing was brought out there. The antineurotic condition was produced originally for centuries, probably, among the Chinese, Japanese, and Filipinos by eating rice—rice that was polished. In other words, there is something in the whole rice that would, if removed, leave a substance which does not contain this protective and as the result the individual gets sick all over and ultimately has paralysis, and this is a point that Professor Jose made especially. If a mother

does not get enough of these substances in her food—and the amount in her milk corresponds to the amount which she takes into her food—the baby will die of beriberi, this neuritis or this dilatation of the heart, even though the mother shows no effects of it herself. Beriberi occurs only under the grossest dietetic violations. If one eats almost nothing but polished rice or polished white wheat flour and meat and fish, as some of those people did, beriberi might occur. It is, therefore, of course true that we do not encounter it here, except that it has been encountered in prisons, etc., where a peculiarly rotten diet was given.

What about vitamine B with reference to a preparation like Hebe? Vitamine B occurs in nature chiefly in the leafy vegetables, we are told, and in seeds and lots of other things. It occurs also to a very rich extent in skimmed milk. It is also not influenced to any extent by heat except in the presence of an alkali. I said that in connection with vitamine A. That should be scratched out. I meant it in connection with this. The vitamine A is influenced by heat in the presence of alkali. Subjecting it to heat practically does not affect it, and the child would get practically as much vitamine B from such a food as this as he would the other.

What about vitamine C? We knew about vitamine C long before the modern school of nutrition experts worked upon the subject. If an infant or child does not get enough vitamine C in his food as he should, he develops scurvy. There is a thing known as infantile scurvy and there is a thing known as adult scurvy. The antiscorbutic vitamine is found especially in fruits and in vegetables and in certain other substances. We never get scurvy in the adult, or rarely ever get it in the adult. It is of interest chiefly in connection with babies. Contrary to what we find in the case of vitamine A and vitamine B, this one is decidedly influenced by heat; perhaps even more so by what is known as oxidation, exposure to air, heating in the presence of air, etc. This ferment is not very rich in milk under any circumstances. It is rich in mother's milk if the mother has a perfect diet. It is very rich in fresh cow's milk, a little less so in boiled milk or heated milk, still less so in the evaporated or dried milks, although the evidence with reference to dried milk is that it is retained there fairly well dependent upon process of drying.

As far as vitamine C is concerned, this food under consideration does not contain much of it. It probably con-

tains somewhat less than fresh milk would; probably about as much as evaporated milk would.

Now, it is a practice that is universal among physicians who have to do with feeding of babies that we give babies orange juice from the second or third month on. That is an almost universal practice now. A teaspoonful of orange juice will supply to the baby all the antiscorbutic vitamines that are necessary. Therefore I give a baby orange juice. I give it if I give mother's milk. I give it if I use raw milk. I certainly would give it if I used evaporated milk. If I gave condensed milk I would use twice as much, or at least quite a little of it, for reasons that I shall speak of later.

There is a fourth vitamine that might perhaps be discussed for a moment, especially in connection with the disease which is associated with this vitamine, and that is rickets. I understand that vitamine four has been announced or is about to be announced. We like to take those things with a little grain of salt. Sometimes we make mistakes about those things, especially if they are announced a little prematurely.

There has been more work done on rickets in the last five years than on any other disease I have ever known of. Out of it something is coming. We are some day going to know something about rickets. One of the surest ways of producing what is known as rickets is to keep a baby on the breast too long, and another way is to give it too much cow's milk. A third way is to give it condensed milk and those proprietary milks of that kind. They are the most common producers of rickets. We know that in cod liver oil we have a specific for rickets. Give a child some cod liver oil and he will not get rickets, and if he has it it will speedily and rapidly cure him. Rickets is very common. I have seen the statement that about 50 per cent of the colored children in this country have rickets. I think it might be said that among the colored children and the poor children in the North it is probably nearer 100 per cent. I have yet to see a colored child in the North that had not to some extent rickets. It is as common as that. It is a very common thing. We hope there is a vitamine that can easily be administered to them. We know one that can be, if there is such a thing, and that is cod liver oil, but we hope there is something that can be done very effectively with reference to that.

How does milk like filled milk stack up as infant food? That can be dismissed fairly readily, except that we want to elaborate on it a little. It is never used as infant food. I have yet to hear of a case in which it was ever used as infant food. I think in the investigation in Madison there was not a single instance, so far as I can recall, in which it had ever been used as infant food. I have been interested for 20 years in the subject of infant feeding.

I am very familiar with the feeding of evaporated milk, condensed milk, cow's milk, malted milk, and all that sort of thing. Only about eight or nine months ago I was asked to go up to Madison to say something like this, and the word Hebe was mentioned. I tell you honestly that I did not know whether Hebe was a patent medicine or a corset. I did not know that it was a form of milk, and yet I have been interested in all of the different kinds of milk, so far as I thought. In other words, so far as I know, filled milk has never been considered and has never been brought out in connection with this sort of thing.

There is another side to that. I was very much interested in hearing what the gentleman, whose name I don't know, said about condensed milk. Now, then, with reference to this preparation called Hebe, I have looked at the can. The can says, "For cooking and baking." I understand they used to say for coffee.

Mr. Jackman: And cereals.

Doctor Brennemann: To be poured on cereals. I sort of think of the Scotchman who puts salt on his oatmeal. Certainly, if he put Hebe on it he would at least get something more nourishing than if he put salt on it. So that it would certainly carry some nourishment.

The Hebe label contains the further statement: "Do not use in place of milk for infants." You may say that mothers do not read labels. If you put that on a can of condensed milk or evaporated milk or filled milk it is exactly the same and has the same significance and the same effect upon the mother as the skull and crossbones do on a drug. She thinks that is something that is not good for a baby. For that reason I do not think that they will ever use it.

This food is even advertised in a very restricted sense. It is definitely stated that it should not be used for babies. If any of those things should ever have a bad effect it would certainly be early in infancy, and there would be the place where it would do harm.

What about the condensed milk that was spoken of a moment ago? Of all the damnable, pernicious foods that we have anything to do with—I use the two words advisedly—that we have to do with as infant feeders, the worst food is condensed milk. Why? In the first place because it is elementally a deficient food—40 per cent. By the time you add the sugar all up it is over 50 per cent sugar which it contains. That is one thing. That is not the only thing. It is very easy to digest. Ever so often I see a baby to whom I will give a little condensed milk for a while, because they all digest it so easily. Condensed milk is the most easily digested food for the baby, and therein consists its danger. For instance, this happens every day: I give a baby a little condensed milk for a while. What happens? They find out in some way that that mother is giving it, and they write her a letter telling her what a wonderful food condensed milk is. I tell the mother, "I want you to keep the baby on condensed milk for a definite time, say, two weeks," and when I call back after a number of weeks I find she is still keeping the baby on condensed milk. I say, "Why didn't you take it off of condensed milk?" "Because the company wrote me a letter and said it was a complete and perfect food."

Condensed milk is used everywhere. I would say that 25 per cent or more of the babies of this country among the poor people are brought up on condensed milk instead of fresh milk.

Mr. Jackman: By condensed milk you mean sweetened milk?

Doctor Brennemann: I mean Eagle Brand. I am not saying anything against any particular brand or for any particular brand. I am simply saying, when you say condensed, I am talking as a practical pediatrician. If I tell [fol. 521] a mother "I want you to get condensed milk," she knows what I mean. It means Eagle Brand. Eagle Brand condensed milk has the floor. It is the thing they all get. Then that mother recommends it to the next and she recommends it to a third. Furthermore, the condensed milk has on the can full and complete directions how to feed your baby without a doctor. In other words, with that can they can feed a baby, can do more than Doctor McCollum or we, who represent two different things, can do, with all that we try to do.

The condensed milk, therefore, is peculiarly rottenly advertised as a complete food, when everybody knows that it is not a complete food. A substance like this, which no one can say is not a nutritious food—of course it is a nutritious food, because coconut oil is nutritious and skimmed milk is *nu*tritious. If this food were advertised as a food for babies, or if this food were advertised as a complete substitute for milk, I would not be here to-day, and I have absolutely no interest in Hebe or anything else. I am simply here to express what I think.

As I say, we used to use skimmed milk quite a good deal, which would be comparable to this product. Mainard Ladd, in Boston, a prominent pediatrician, recently used skimmed milk with homogenized olive oil, with very good results.

Gerstenberger, as you know, has a preparation which contains only skimmed milk and certain other oils, cod-liver oil, which acts as a fat soluble. A substance which would come under such a law as is being contemplated. Gerstenberger and his coworkers have fed thousands and thousands of babies, and I think he tells the truth when he says, in answer to one question, that they are well nourished. Yet that is a substance which contains only skimmed milk and certain oils, etc.

What about milk, fourthly, as food for older children and for adults? Here I unfortunately have to differ a little bit from my friend Doctor McCollum. The slogan "Use more milk," from a pediatric standpoint, is a rather bad one. When you say every baby ought to have a quart or more of milk, one is saying something that has been deduced from the laboratory and that does not apply with reference to children. It has long been a maxim with us who feed babies that we must not give too much milk, and we know that babies actually get along better on less of it the first year and during the second year, and after that if they do not take too much milk. That is the experience of a practical pediatrician. It is the experience of nearly all pediatricians, as compared with the experience of a professor or person who makes his deductions from what white rats and guinea pigs will do under certain circumstances. I grant freely that milk is a highly nutritious food, and I grant that vitamine A is a valuable substance and is necessary for white rats and for humans, but when one says you must drink more milk, you ought to drink more than a

quart rather than less than a quart, that is going too far. It is an infallible rule with nearly all of us that we never give any baby more than a quart of milk a day. If I see a baby that is brought to me that is getting more than a quart of milk, I don't care how well it is, I say, "Let us cut it down."

Now, then, as to experiments on older children. I have been personally—and I don't know as I have ever expressed myself about it—a little bit irritated by this weighing, measuring, etc., campaign that is going on all over the world. Deductions are made on insufficient data. Those cases are not each one of them taken and the whole circumstances weighed, etc. Take, for instance, such an illustration as this: One goes to an orphan asylum and one takes half of the children and gives them a quart of milk a day. They forget that those children have been improperly fed. They have gotten a quart more of food a day and have gotten it in a form in which it can be taken into their systems. There are many other questions that should be given consideration. The question of rest, the question of hygiene, the question of lots of other things enters into it. In private practice when I see a thin, undernourished child brought to me, one of the things that never occurs to me is "give your baby a quart of milk and it will get fat." The way to get that baby fat is to take it out of its environment, put it in an orphan asylum or in a hospital, and it will eat when it won't eat at home. It is psychology.

I happen to have three children myself. One of them is, as I often say to her, a guzzler of milk. She goes to the table and always likes to drink a glass of milk before she starts in with other things. That occurs daily, or twice a day, as I am there only in the morning and in the evening. I say, "Don't drink all that milk before you eat something else." She is the only skinny one I have got, and she is really very skinny, yet that one drinks lots of milk. The oldest one is unusually robust. She won't touch milk. The youngest one is robust. She eats spinach and things like that. She is orthodox, so far as nutrition is concerned.

So we are not so convinced that milk really has all the properties that are sometimes attributed to it. Anyway, an older child eats butter. But the most important thing in connection with this would be, of course, the fat soluble A.

An older child eats butter. We don't know how much it needs, but we have a sneaking suspicion it needs very little fat soluble A, and it probably gets enough in leafy vegetables and all the other things the child eats.

The fifth point I have already mentioned, and that is in connection with advertising. I think if a preparation of this sort were improperly advertised, if it were advertised as not containing what it does contain, if it were fraudulent and adulterated, from that standpoint, if it were recommended as a complete food for infants, as condensed milk and malted milk and those things are, then I would say that it ought to be—I was going to say annihilated, but condensed milk and malted milk nobody is for annihilating, simply because 25 per cent of our babies are brought up on condensed milk, and harmfully brought up.

Mr. Jackman: Doctor, let me call your attention to two or three things that have gone into the record before. What position do you occupy in Chicago with reference to any hospital, and the opportunity of examining these children?

Doctor Brennemann: Well, to go back, I have been at various times on the staff of the Children's Hospital, St. Luke's Hospital, Western Hospital, Charity Hospital, Post Graduate Hospital, the Women's Hospital, and was on the staff of Northwestern University about two years ago. I left all of that to take charge of the Children's Memorial Hospital. The Children's Memorial Hospital, of which I am chief of staff, has about 175 beds, and I should say we run through about 25,000 children a year. And in that connection, the Children's Memorial Hospital is to be the postgraduate department of pediatrics of the University of Chicago, and in that way I am on the staff of the University of Chicago.

Mr. Jackman: Did you ever hear of or see in your practice any infant that had been fed on Hebe or any other such compound?

Doctor Brennemann: I never have.

Mr. Jackman: In what way do the effects of this sweetened condensed milk, such as Eagle brand, show in the child? You said they had an ill effect upon the child. Just in what way does it manifest itself?

Doctor Brennemann: Chiefly in the condition that we call rickets; and, to put that perhaps more lavily, in that they get a large square head, pot bellies, bad legs, are flabby, have very little resistance to disease, and start to

melt away when anything gets the matter with them, etc. They usually have at least the second set of teeth very bad. The first set may not be so bad. The second set of teeth will usually be very bad, because the second set of teeth is at that time in the embryonic stage and more easily influenced.

Mr. Jackman: What have you to say, Doctor, with respect to the necessity of experiments on albino or white rats being confirmed by clinical observation?

Doctor Brennemann: When we apply it to humans?

Mr. Jackman: Yes.

Doctor Brennemann: I should say they ought absolutely to be confirmed. I should say further that experiments on a white rat should be confirmed by experiments on a guinea pig. I mean by that that certain of these vitamines we know, if they are absent, have a certain effect upon white rats and have a different effect upon guinea pigs. Vitamine A, if absent from the diet, will produce xerophthalmia in a white rat. So far as we know, vitamine A is not essential to a bird. Perhaps in the last 48 hours or so that has been settled differently, but up until very recently that was not thought essential to a bird.

Take the matter of scurvy. Scurvy has not been produced in a rat, so far as I know, although it has been tried. Scurvy can be produced very easily in a guinea pig. Whether a human being is a rat, a guinea pig, or a bird, with reference to any of these things, of course remains to be determined; and it can not be determined, because we can not subject an infant to the sort of experimentation that we can a young rat; but the person who can determine it by the method by which it can be determined is the clinician, and not the man who is doing the work on white rats and guinea pigs.

Mr. Jackman: You spoke about pasteurizing milk. What is the fact as to whether milk in its raw state is a carrier of disease?

Doctor Brennemann: Well, there are some parts of that that, if you do not know too much about you can talk about [fol. 522] very much more glibly than usual. Of course, we used to talk the same way about diarrheas which are very common in infants, being carried by organisms in the milk. We are not at all sure about that. I am not at all sure but that the thing is first of all a question of nutrition—dietetics—and the organisms get hold of it after that. Of course, we

know that typhoid, scarlet fever, dysentery, and things like that can be carried by milk—streptococcus infections. I boil all milk I give to babies. I do it partly for that reason, also for the reason that boiled or evaporated milk is much more easily digested than raw milk.

Mr. Jackman: Is that on account of the difference in the fat globules in mother's milk and cow's milk?

Doctor Brennemann: No; the difference is in the size of the curd. The raw milk will produce a curd as big as a banana in the stomach. Boiled milk makes a curd as big as your finger, or something like that.

Mr. Jackman: There is a difference in the mother's milk and the cow's milk in the size of the fat globules?

Doctor Brennemann: I think they say there is. Some years ago I looked that up, and one would say that the fat globules were a little larger in cow's milk, and another would say they were not larger, but there were larger and smaller ones. I don't believe there is very much known about that, Mr. Jackman.

Mr. Jackman: Would this pasteurizing of milk have any effect upon vitamine C, or the antiscorbutic vitamine? What effect would it have?

Doctor Brennemann: Specifically, in as far as anything you can put your finger on is concerned, we have to practically go back to Hess's work. Fresh cow's milk contains vitamine C if it is fresh and recent. I mean unboiled milk if it is fresh and recent, and if the cow had been on fresh grass, etc., so that she elaborates a lot of this fat. If that milk stands for a long time, the very process of age probably has an inferior effect. If it is heated it probably has still more effect. If it is pasteurized it probably has much the same effect. I have never been able to believe, myself, that pasteurization in itself has a more deleterious effect than boiling. The fact that pasteurization is supposed to have a more deleterious effect goes back to a rather interesting time when it was thought that perhaps bacteria or infection caused scurvy, and because Hess developed that an infant developed scurvy more readily if fed on pasteurized than on boiled milk, he and probably McCollum and others thought that scurvy was an infection rather than a vitamine deficiency.

Mr. Jackman: You spoke about rickets. Has the hygienic condition under which the child lives, such as sun

light and things of that character anything to do with rickets, so far as as been demonstrated by clinical experience?

Doctor Brennemann: Very much so. It has been demonstrated recently, from a number of different angles, if you expose children to sunlight the rickets will heal permanently. If you expose them to a quartz lamp they will heal, or expose them to an ordinary carbon light they will heal. The fact is that light has a very marked effect. Rickets will develop when a child is kept indoors in the winter, and will be apparent in the spring. It takes several months to produce rickets.

Mr. Jackman: Do you know of rickets in breast-fed infants?

Doctor Brennemann: Yes, sir.

Mr. Jackman: Do you know of rickets in children fed on whole milk?

Doctor Brennemann: Yes, sir. You get rickets from any of them.

Senator Kendrick: Our chairman has authorized Senator Ladd and myself to adjourn the committee until 10.30 to-morrow morning.

(At 1 o'clock p. m. the hearing was adjourned until 10.30 o'clock a. m., Wednesday, August 2, 1922.)

Filled Milk

Wednesday, August 2, 1922

United States Senate,
Subcommittee of Committee on Agriculture and Forestry,
Washington, D. C.

The subcommittee met, pursuant to adjournment, at 10:30 o'clock a. m., in room 224 Senate Office Building, Senator William B. McKinley presiding.

Present: Senators McKinley, Ladd, and Kendrick.

Senator McKinley: The committee will come to order.

Mr. Jackman: Mr. Chairman, yesterday I inadvertantly omitted to enter my appearance on behalf of the Indiana Condensed Milk Co., of Indianapolis, Ind. Appearance was entered on behalf of the Hebe Co., and I would like the

record to show my appearance at this time for the Indiana Condensed Milk Co.

Mr. Miller: Mr. Chairman, yesterday, through like inadvertance, I neglected to enter my appearance for the National Milk Producers' Federation. My name is John D. Miller, general attorney of that association.

Mr. Jackman: Yesterday Mr. Bryan, may it please the Chairman and the committee, made a request of me after the meeting had adjourned, that he would like to have Doctor Brennemann remain over for some further cross-examination and, at considerable inconvenience to the Doctor, he has remained and is now here. I will appreciate it if, on account of his professional work, Mr. Bryan will go ahead.

Mr. Bryan: Yes, sir.

Statement of Dr. Joseph Brennemann—Resumed

Mr. Bryan: Doctor Brennemann, you testified yesterday that you took some part in the Wisconsin case which was concerned with the prohibition of the sale of Hebe. Will you tell us what part you took in that case?

Doctor Brennemann: What part I took?

Mr. Bryan: Yes.

Doctor Brennemann: I was asked by the Hebe people to go up there and answer some questions and tell what I thought about Hebe and the nutritive value of Hebe, etc., and I gave such testimony.

Mr. Bryan: In court?

Doctor Brennemann: I guess it was in court. Is that what you call it?

Mr. Jackman: No doubt about it.

Doctor Brennemann: I am not very familiar with legal usages.

Mr. Bryan: You did not take any part in the proceedings leading up to the passage of the bill by the legislature is that correct?

Doctor Brennemann: What I did is what I have just said.

Mr. Jackman: No; he did not.

Mr. Bryan: In your testimony before the reference in the Wisconsin case you covered pretty much the same ground which you covered in this case before the committee, did you not?

Doctor Brennemann: I merely at that time answered questions which were asked me by Mr. Jackman and by another man, but did not cover it, I think, nearly as fully as I did yesterday.

Mr. Bryan: But you covered the ground in a general way before the referee.

Doctor Brennemann: Fairly so.

Mr. Bryan: Have you been advised as to the outcome of that case in Wisconsin?

Doctor Brenneman: I had a communication to the effect that the decision had been adverse, I think, to the Hebe Co. [fol. 523] Mr. Bryan: Yes; that the lower court decided against the Hebe Co., and then there was an appeal taken——

Doctor Brennemann (Interposing): I do not know anything about that.

Mr. Jackman: You are wrong.

Mr. Bryan: Anyhow, the highest court of Wisconsin has decided the case. That is correct, is it not?

Mr. Jackman: Yes. That case was brought in the supreme court as a court of original jurisdiction, and the matter was referred to a referee, Judge Zimmerman, for the purpose of making findings of fact and reporting them to the court, and the questions of law were then argued before the supreme court on the Wisconsin statute.

Mr. Bryan: So the Wisconsin decision is the decision of the highest court of Wisconsin?

Doctor Brennemann: I have no knowledge whatever about that.

Mr. Jackman: There is no doubt about that.

Mr. Bryan: Mr. Jackman so states. I just want to get it in the record.

Are you aware, Doctor Brennemann, that the Supreme Court of Wisconsin specifically found that Hebe and similar compounds were and are sold by retailers as milk?

Doctor Brennemann: I really do not know anything about that.

Mr. Bryan: You do not know that?

Doctor Brennemann: I am not interested in that. I mean I really do not know anything about it. I simply went there for that and dismissed the thing from my mind and have been asked to come here again. As I understand,

I am simply here as a person who knows something about the effect of food on children to tell what I know about it.

Mr. Bryan: As I understood you yesterday, you said Hebe was not sold as milk and not sold for feeding children.

Doctor Brennemann: I did not say it was not sold as milk.

Mr. Bryan: What did you say?

Doctor Brennemann: Perhaps you had better have that read. I will be glad to state what I said. I said I have not known of my own knowledge or from anyone else of Hebe ever having been used for the feeding of a baby.

Mr. Bryan: So if other witnesses have testified or should testify that Hebe has been and is used for feeding children, that would change whatever view you have on that subject?

Doctor Brennemann: No; it would not change my view. I made a statement yesterday and that statement is correct.

Mr. Bryan: You have no personal knowledge?

Doctor Brennemann: I have no personal knowledge.

Mr. Bryan: Therefore if anyone should testify that he did have personal knowledge of Hebe being fed to infants or small children, you would not contradict them?

Doctor Brennemann: Not at all. I am perfectly willing to believe him if he seems creditable.

Mr. Bryan: I understood you to say yesterday that you were not convinced that Hebe or skimmed milk were lacking in fat-soluble vitamine A. Is that correct?

Doctor Brennemann: That I was not convinced?

Mr. Bryan: Yes.

Doctor Brennemann: Yes; I think that is substantially correct.

Mr. Bryan: Suppose it should appear to you that the Supreme Court of Wisconsin had held that it was lacking in fat soluble vitamine A; would that change your opinion on the subject?

Doctor Brennemann: The opinion of the Supreme Court of Wisconsin would not change my opinion on a matter of nutrition.

Mr. Bryan: The fact that the Supreme Court of Wisconsin had perhaps 20 or 25 witnesses before it in addition to yourself, and found from all the evidence that this substance

Senator McKinley: I do not know whether I ought to intervene, but are you stating the case correctly?

Mr. Jackman: No.

Senator McKinley: Is it not a fact the referee decided exactly the other way, and the supreme court decided that as the legislature had passed a law it was a legal law?

Mr. Bryan: That was the point of the decision, but the referee did not decide the other way?

Mr. Jackman: Yes; he did.

Mr. Urion: I understand that the chairman is correct, and we have here an official transcript of the referee's findings of fact on that which we will later introduce.

Mr. Bryan: I have the opinion right here.

Mr. Jackman: The findings of fact under the Wisconsin law, under a specific statute of the State of Wisconsin, have the same effect as a special verdict of a jury on the questions of fact, and were not disturbed by the supreme court, and no exceptions were taken by the State, and therefore the question was not before the court.

That case was decided—if you will pardon me, Mr. Bryan—that case was decided on the ground that the legislature of the State of Wisconsin had passed a law under the public policy or public health provision and that it could be sustained and was sustained on the ground that if it was at all harmful to the dairy industry in the opinion of the legislature, that was sufficient to sustain the law.

Mr. Bryan: Mr. Jackman, you are misstating the case.

Mr. Jackman: Why do you not put the record of the opinion in here?

Mr. Bryan: We are going to put it in. Who is trying the case, you or I?

Mr. Jackman: I do not know.

Mr. Bryan: I do not either, at this rate.

Senator McKinley: You are asking opinions of an expert; but what does this expert know about the law?

Mr. Bryan: I am reading him the language of the finding which was adopted by the Supreme Court of Wisconsin:

"The compound has been manufactured in the State for the last five years, while condensed or evaporated milk has been manufactured and on the market for the last 25 or 30 years. The compound is not deleterious in itself, but is not of the same quality or food value as the genuine evaporated milk. It is lacking in a certain chemical substance known

as vitamines A, which are essential elements of a proper dietary."

That is the language of the Supreme Court of Wisconsin by adoption. Now, I ask you again, Doctor, in view of that finding, are you still prepared to say that you are not satisfied of the correctness of that statement?

Doctor Brennemann: You are asking me a different question. You are asking me whether that statement is correct. That was not the question you asked me before. You asked me before if my opinion would be influenced by the decision of the Supreme Court of Wisconsin on a nutritional problem.

Mr. Bryan: Answer that first.

Doctor Brennemann: It would not.

Mr. Bryan: Now, answer my other question.

Doctor Brennemann: What was it?

Mr. Bryan (to the reporter): Will you read it?

(Question read by the reporter as follows:)

"That is the language of the Supreme Court of the State of Wisconsin by adoption. Now, I ask you again, Doctor, in view of that finding, are you still prepared to say that you are not satisfied of the correctness of that statement?"

Doctor Brennemann: Would you mind putting it differently? Do you mean am I prepared to indorse that statement?

Mr. Bryan: I ask you——

Doctor Brennemann (Interposing): You are confused. You have asked me two different questions, one at one time and another at another.

Mr. Bryan: You have answered one. Now, answer the other any way you want.

Senator McKinley: Read it again.

(Whereupon the question was read by the reporter as follows:)

"That is the language of the Supreme Court of the State of Wisconsin by adoption. Now, I ask you again, Doctor, in view of that finding, are you still prepared to say that you are not satisfied of the correctness of that statement?"

Doctor Brennemann: Am I still prepared? I was not prepared in the first place. Will you read that statement again? I want to know specifically what you mean. Do you mean am I prepared to indorse the finding?

Mr. Bryan: Do you agree with the finding? That is what I want.

Doctor Brennemann: Do you mind reading it again?

Mr. Bryan: "The compound is not deleterious in itself (referring to Hebe and similar compounds) but is not of the same quality or food value as the genuine evaporated [fol. 524] milk. It is lacking in a certain chemical substance known as vitamines A, which are essential elements of a proper dietary."

Mr. Jackman: Why not read the rest of that paragraph?

Mr. Bryan: You may read it if you want, sir.

I ask whether or not you agree with that statement.

Doctor Brennemann: Yes; I agree with the statement that filled milk does not contain, as far as we know, as much vitamines A as does evaporated milk or fresh cow's milk. Everybody agrees to that.

Mr. Bryan. It says, "It is lacking in a certain chemical substance known as vitamines A."

Doctor Brennemann: I do not know what it means. If it means it is wholly lacking I would not agree with it. If it means it is lacking to a certain extent or to a considerable extent, I would say yes, so far as we know from the results of the investigations of nutrition experts.

Mr. Urion: Mr. Chairman, Doctor, may I call your attention to the fact that in talking to the counsel some of the members of the committee may not be able to hear you?

Senator McKinley: We can hear you all right.

Mr. Bryan: I was not quite clear yesterday, Doctor Brennemann, as to your view as to whether or not skimmed milk is a proper food for infants and young children.

Doctor Brennemann: It is a perfectly good food as far as it goes; yes.

Mr. Bryan: You referred to the fact that a Doctor Hess in New York had fed skimmed milk to children in his orphan asylum and that the results were satisfactory.

Doctor Brennemann: He said that the children grew well and did not show evidence of rickets. I think that was the chief thing that he said about it.

Mr. Bryan: Did he state in what particulars or the circumstances under which those experiments were conducted?

Doctor Brennemann: I do not know definitely about that. I think he used skimmed milk, orange juice, and cottonseed

oil, if I am correct about that. I think Doctor Funk can answer those questions better than I can.

Mr. Bryan: Did he use that for all of them or for certain selected children?

Doctor Brennemann: I do not know. I think he fed quite a number of them that way.

Mr. Bryan: That is, the general run of them or certain of them who had certain disorders or certain characteristics?

Doctor Brennemann: I think they were all healthy children. I do not want to say very much about that, because I can not very well vouch for what some one else did, nor am I absolutely familiar in detail with what was done.

Mr. Bryan: You are not prepared to go on record as saying it is his idea of what is proper diet for infants and young children?

Doctor Brennemann: I do not think anyone would.

Mr. Bryan: Therefore you do not give Doctor Hess's report as conclusive on the subject?

Doctor Brennemann: What do you mean by Doctor Hess's report on the subject? That is was a perfectly satisfactory food for infants? He has never said that—at least from what I know of Dr. Hess I do not think he has said it.

Mr. Bryan: So you would not regard Doctor Hess's experiment as a warrant for any statement or conclusion that skimmed milk or skimmed milk enriched with vegetable oil is a proper diet for young children?

Doctor Brennemann: For infants?

Mr. Bryan: Or young children?

Doctor Brennemann: It was used on infants. If you are speaking of Doctor Hess you ought to confine yourself to infants.

Mr. Bryan: I am asking you. I never heard of Doctor Hess in my life.

Doctor Brennemann: I am simply trying to get it correct in the record.

Mr. Bryan: The impression that I got was—and the committee may have gotten the same impression—that Doctor Hess had been extensively feeding infants and young children skimmed milk and that it was a satisfactory diet.

Doctor Brennemann: I think you have it wrong. It was an experiment for therapeutic reasons. Doctor Hess fed a number of infants for a long time on skimmed milk, cotton seed oil, and, I think, orange juice, for the purpose of de-

termining a certain question clinically—to determine whether skimmed milk has a sufficient amount of vitamines A to permit these children to grow normally.

Mr. Bryan: What was the result of his experiment?

Doctor Brennemann: As I understand it—and really, as I say, I am hardly prepared to state definitely about that—as I remember it, his infants grew fairly normally, and the conclusion that he reached from it was that vitamines A evidently were present to a certain extent in the skimmed milk or else that vitamines A were not very essential or essential only in small amounts for infants.

Mr. Bryan: Do you agree with that conclusion, then?

Doctor Brennemann: I do not know whether I could answer that question from experience.

Senator Ladd: When were these experiments carried on, Doctor?

Doctor Brennemann: I think about two years or so ago. I have no definite information about that. I think two or three years ago.

Mr. Bryan: For how long a period were they conducted?

Doctor Brennemann: As I understand it, for five or six months.

Mr. Bryan: Then they were discontinued?

Doctor Brennemann: They were discontinued.

Mr. Bryan: Do you regard the experiment as establishing as a therapeutic or nutritional fact that a diet of skimmed milk enriched with vegetable oil is proper for young children or infants?

Doctor Brennemann: Well, I can only say just as the opinion of the Supreme Court had influenced me that influenced me one way or the other.

Mr. Bryan: Not influenced by that either?

Doctor Brennemann: Because I have used skimmed milk at one time or another and I have kept a baby for many months on a skimmed milk mixture and had it grow beautifully.

Mr. Bryan: Was there anything the matter with the baby in the first place?

Doctor Brennemann: It came at a time when we were very much afraid of feeding fat, and I thought the child had an intolerance for cow's milk fat, and I took the fat out of the milk and thought I would keep it on it for a few weeks, and finally I kept it on it for a long time. It was such a

wonderful specimen that I felt perfectly justified in doing it.

Mr. Bryan: In other words, this child was in an abnormal dietetic condition?

Doctor Brennemann: No; I would not say it was in an abnormal dietetic condition, perhaps. Well, yes; I suppose you could say so, too. It was abnormal to the extent I thought at that time it could not tolerate the fat of cow's milk. It was certainly not abnormal afterwards.

Mr. Bryan: Of course, it is recognized and conceded that under certain circumstances a diet of skimmed milk may be desirable for certain children.

Doctor Brennemann: Yes.

Mr. Bryan: But not for the general run of them?

Doctor Brennemann: No; that is the only way we ever used skimmed milk, is as a temporary therapeutic measure.

Mr. Bryan: The impression I got from you yesterday was that Doctor Hess's experiments had furnished the foundation for the belief you apparently accepted, because you stated the fact

Doctor Brennemann (interposing): I want to correct—

Mr. Bryan: One moment. Because you stated the fact that skimmed milk could properly be fed to young children.

Doctor Brennemann: Could perfectly properly be fed to young children, not as a complete diet, for a long period of time, I think we are all agreed on that, that skimmed milk itself is not an appropriate diet for a baby for a long time; that none of us would want to keep a baby for a long time on skimmed milk alone.

Mr. Bryan: When you speak of skimmed milk being thought to contain a certain undetermined quantity of vitamine A, are you referring to milk skimmed by the ordinary means—that is, by simply taking the cream off with a skimmer or other utensil, or are you referring to milk skimmed as it is commercially—that is, by means of a mechanical separator?

Doctor Brennemann: I think most of the work on which such an idea could be based is with centrifuge skimmed milk. Personally, I do not care much whether you have the one view or whether you have the other, as long as the men who are supposed to know most definitely about it vary from one-tenth to one-half in estimates of fat soluble A in certain milk. I do not know why my opinion should be worth anything or whether I have anything to base it on.

Mr. Bryan: Do your know whether the men you are referring to were referring to mechanically skimmed milk or ordinary skimmed milk?

[fol. 525] Doctor Brennemann: I assume they were refering to mechanically skimmed milk.

Mr. Bryan: But you do not know?

Doctor Brennemann: I do not know.

Mr. Bryan: You do know mechanically skimmed milk contains a much less residuum of butter fat than ordinary skimmed milk?

Doctor Brennemann: Certainly.

Mr. Bryan: Do you know what variation there is?

Doctor Brennemann: That would depend on what you mean by ordinarily skimmed milk. If you mean when the mother lets it stand and skims it off, or skims it with a dipper, that might be from one-half to 10 per cent.

Senator Kendrick: Mr. Chairman, I suggest they should be limited to direct questions as much as possible.

Senator McKinley: I was thinking the same thing.

Senator Kendrick: It is entirely right to ask the witness these questions back and forth one side and the other, but the questions ought to have not an incidental but a direct meaning in the settlement of this question. I had drawn the same conclusion from listening to the doctor yesterday as I have reached since he has explained this in this long, detailed way to you.

Mr. Bryan: I was not clear as to just how far he wanted to go in his statement yesterday as to the food value.

Senator McKinley: The doctor told you yesterday that his experience was in taking care of children. He would not know anything about the technicalities or quibbles of the Supreme Court in making its decision. You know and I know that it was straight quibble.

Mr. Bryan: We are not on the Supreme Court at this time, sir. I had completed that.

Senator McKinley: You were on the Supreme Court.

Mr. Bryan: I am asking about the experiments of Doctor Hess and trying to get clearly about what he meant to say about skimmed milk having a nutritional value for children. If he has made that clear that is all I have on that.

Just one or two more questions I wanted to ask you, Doctor. You stated yesterday if I misstate your testimony please correct me, because I want to get it clear on the record—I understood you to say yesterday that you

did not regard the experiments conducted by Doctor McCollum and others in the laboratories as to the dietetic effects of skimmed milk and milk compounds on rats and other animals as entitled to very much consideration by a clinician.

Doctor Brennemann: You are stating that very wrongly. I did not say those things did not deserve very much consideration. We have kept our ear very close to the ground to listen to what Doctor McCollum and Doctor Mendel and the rest of them have said, but when they condemn our whole construction of infant feeding, as one of them has—and many things of that sort—on experiments made on white rats, guinea pigs, and pigeons, they have gone too far. I say that one can not make deductions from guinea pigs to white rats or from white rats to another quadruped like a guinea pig as to the effect on infants, and therefore it is not for them to decide to what extent these things influence the child.

Mr. Bryan: If, however, Doctor McCollum, by laboratory experiments, developed the fact that a diet of milk compound produces in rats serious nutritional disorders, would you be prepared in the present state of your own experience to feed that same substance to infants or young children?

Doctor Brennemann: Yes. The mere fact that they have found something would make me be cautious about it, but I would want to check the thing very carefully. I would want to watch the baby; etc. But the same thing applied, as I said a moment ago—the same thing that will produce scurvy in a guinea pig will not produce it in a rat. Therefore, it may not produce the same thing in a human. It takes very much less antiscorbutic factor to prevent scurvy in a monkey than in a guinea pig, and probably a human being is more nearly analogous to the monkey than to the guinea pig.

Mr. Bryan: Would you take the responsibility as a physician of recommending as a diet for infants and young children the substance that produced that effect [exhibiting photograph to Doctor Brennemann] on a rat?

Doctor Brennemann: It is not proper to compare this with a human being. But you ought to have a picture of a guinea pig and one of a rat to show that in one case scurvy was produced in the guinea pig, and the rat was perfectly immune to it.

I am perfectly willing to admit the fat soluble A is probably tremendously important to the human being. There is no question about it. Anybody would be a fool who would deny it.

Mr. Bryan: That is all.

Mr. Jackman: If the committee will bear with me, I think there have been some rather incomplete statements made.

They have shown you a picture here of a white rat and, as I understand, those are the photographs which were used in Doctor McCollum's statement before this committee before. Am I correct, Mr. Bryan?

Mr. Bryan: Yes.

Mr. Jackman: But you do not feed a baby 60 per cent of rolled oats, but you give him the milk alone supplemented by some orange juice, do you not?

Doctor Brennemann: Yes.

Mr. Jackman: It was not stated to you in the question that was put that the picture of this white rat which had had a diet of 22½ per cent only of Hebe, also had 60 per cent of rolled oats in his diet. Could you draw any conclusion, in your judgment from such an experiment as applied to the human being, a baby, for example?

Doctor Brennemann: Even if there had been much more Hebe or filled milk in it, it would not influence my opinion with reference to the baby anyway. We do not feed babies on purified casein, purified sugar, or purified other things.

We found in making experiments with reference to vitamine B that the milk sugar or something carried some vitamine by and we had to recrystalize it over and over again. In other words, it is hard to tell when you have it out of a diet, and in the way a physician feeds a baby you can not cut those things out. There are some of them there.

Mr. Jackman: In other words, you can not feed purified rations to a child as you do to these rats?

Doctor Brennemann: That is only done on experimental animals. A baby has not yet become an experimental animal in that sense.

Mr. Jackman: Do you know Doctor Marriott, of St. Louis?

Doctor Brennemann: Very well.

Mr. Jackmann: Will you tell the committee who he is?

Doctor Brennemann: Doctor Marriott used to work with Doctor Howland at Johns Hopkins and went from there to be the head of the department of pediatries at the Uni-

versity of St. Louis. He is the head of that department there, and that is considered one of the very strongest departments in the country. As far as Doctor Marriott himself is concerned, I think every pediatric physician would admit Doctor Marriott occupies a position in the very foremost rank as a pediatric physician and dietitionary expert in the country.

Mr. Jackman: I have here an article that I do not care to take the time to read, but will offer later on for the record, but I do want to call your attention to this language in this article and see whether you agree with it or not. This article is by Doctor Marriott:

"There is no field of medicine in which there has been more superstition, careless experimentation, and commercialism than in the feeding of infants. As a result we find the market flooded with all sorts of patent baby foods, the majority of which possess no value, and many of which are distinctly harmful. Their large sale is due to the fact that most mothers, and some physicians have not known just how a baby should be fed. They, therefore, read advertisements of Smith and Jones' baby foods, go to a drug store, buy a bottle with full directions, and feel that the problem is solved.

As a matter of fact, all the mother needs to buy in order to make up food for her baby is a bottle of milk and a bag of sugar. A simple mixture of milk, sugar, and water, or barley water, is just as good as any patented baby food, far better than many, and cheaper than any. If the grocer sold sugar in a fancy package with directions for making up a baby's feeding, or if the milk bottles came with labels telling how to dilute for use in feeding infants, people would probably not go to a drug store and buy sugar or starch at 75 cents a pound and use it for feeding their babies; nor would they use that most perfect baby killer of all, sweetened condensed milk."

Do you agree with that statement or not?

Doctor Brennemann: I would agree with every part of it absolutely unconditionally except I think in speaking of condensed milk the word "killer" is not used as well as it might be. I would say maimer, crippler, or something of that sort in place of it, because condensed milk does not ordinarily kill directly.

[fol. 526] Mr. Jackman: Now, reading for a moment from the same article, "The infant may not weigh as much at the end of the first year as one fed on such food as condensed milk, but he will be a much healthier child. Friends of the mother are likely to point out the fact that their babies, fed on condensed milk, are half a pound or a pound heavier, and this is very frequently true. The extra weight, however, consists largely of flabby fat, and when such an infant is attacked by disease he is very likely to succumb. Furthermore, rickets, a disease leading to bowlers and deformed heads and chests, occurs more frequently in infants fed on condensed milk than in any other group of infants.

"Condensed milk is simply cow's milk which has been evaporated down a little more than half and with sufficient granulated sugar added to make a thick sirup. An infant fed on it receives more sugar than is good for it, and never receives a sufficient amount of butter fat and the constituents to make solid bone and muscle. The fatness of the condensed milk baby is somewhat similar to the fatness of the confirmed beer-drinker; it is not healthy fat. Some infants have a strong constitution and get along well on a poor food, and these are the infants that are used to advertise the patent foods. The other side of the picture one sees in the wards of an infants' hospital. Many a time I have seen a whole ward filled with infants almost in a dying condition, practically every one of whom has reached the condition as a direct result of having been fed on one of these popular brands of sweetened condensed milk."

Is that your experience and do you agree with that statement?

Doctor Brennemann: I agree with it thoroughly, but I do not know that I have ever seen a whole ward filled at one time. But generally I indorse that completely, and I think ninety-nine physicians out of one hundred do.

Mr. Jackman: That is all.

Senator McKinley: Thank you. The next witness.

Mr. Jackman: I would like to call Dr. Philip Moen Stimpson, of New York City, and for the information of the committee I will state that Doctor Stimpson is the school physician for the Horace Mann School of Columbia University; associate attending physician of the Willard Parker Hospital; instructor of pediatrics in Cornell University Medical School; chief of the pediatric section of the

Cornell clinic. He is also attending physician of the out patients' department of the Nursery and Child's Hospital, New York City, and was formerly supervising pediatrician of the American Red Cross health stations.

I am telling the committee that because the doctor may not desire to state his own qualifications.

Statement of Dr. Philip Moen Stimpson, New York City

Doctor Stimpson: I have to amend some of these "the's" to "a's."

In the first place, I would like to say that since coming back from France I have been very considerably interested in the nutrition of children, and my questioning of a mother or a child has been along the lines of nutrition or their diet in the past.

Any doctor has his hobby and some doctors are interested in one line and other doctors are interested in other lines. I have been interested in the nutritional line, and therefore my study has been largely along the question of diet. I have had clinical experience in New York City that takes in all walks of life and most of the sections of the city. The Red Cross nutritional work had health stations in Greenwich Village, another one down at Tenth Street and Avenue B, and another one in Harlem. The Nursery and Child's Hospital is situated in the "black belt," at Sixty-first Street and First Avenue. The Cornell clinic is at Twenty-seventh Street and First Avenue and draws from Greater New York.

The Horace Mann School is a school of Columbia University and draws from the higher walks of life. It is the largest private school in New York City.

Accordingly, I feel justified in saying that my experience has been a broad one.

Now, in the second place, all babies are different. What is good food for one baby may be poison for another. We know well that certain babies have an idiosyncrasy for cow's milk and can not take it in any form whatever without being acutely poisoned. We also know other babies can not touch egg in any form with being acutely poisoned. What is good food for one baby is not necessarily good food for another baby but may be poison to it. Any food has elements which must be taken into consideration for any baby: First, fat; second, carbohydrate; third, acids;

fourth, salts; fifth, water, containing a number of substances known as vitamines. I heard it referred to as a chemical. They do not know that; they merely know if is present or absent by its effect on animals, and the other vitamines by their effects on human beings by their presence or absence in the diet. In a sense every baby can be considered abnormal. I heard a question you had a while ago, something about skimmed milk for a baby. Was that an abnormal baby? In a sense every baby is abnormal because it is an individual-feeding problem.

I have never heard in my experience of Hebe having been fed to any baby. Last week, Thursday, there was a meeting of the staff of doctors of the out-patient department of Bellevue Hospital in New York City, which has the biggest attendance of any public clinic in New York City, and a friend of mine asked the 15 doctors present if any of them ever heard of a baby having been fed with Hebe, and none of them had ever heard of a baby being fed with Hebe. Those doctors were doctors from all over New York, and doctors with a very considerable pediatric experience. In addition to those 15 doctors I have talked with other baby doctors in New York City, doctors of very extensive dispensary experience, and none of them have ever heard of a baby being fed with Hebe. In addition to that, I have asked about 30 chance mothers who have come to the various dispensaries and asked them if they have ever heard of a baby having been fed with Hebe, and none of them ever had.

Of course, that is negative testimony, but it gives a cross section of New York.

Now, what is the average ignorant New York mother going to do who has a baby? She is very ignorant. What is she going to do to feed her baby? In New York City she is going to do one of three things: She is going to take her baby to one of the ninety-nine milk stations which are scattered all over New York City, and there she would probably be told to feed the baby on a formula consisting of milk, water, and some kind of sugar. Or she is going to ask a friend and the friend is going to suggest just that, milk, water, and sugar; or the third thing she is going to do is to answer the advertisements she has seen in the papers or elsewhere, or the letters she has received, and is going to feed the baby on Eagle Brand condensed milk, because it gives instructions on the can how to feed the baby.

Could we have one of those cans submitted right now, please? We have a can here of Eagle Brand condensed milk, which gives the instructions on it how to feed a baby with Eagle Brand milk. Now, personally I would have no objections to feeding a baby with Hebe. In my opinion, there is nothing in Hebe which in itself is harmful to a baby. The simple matter is it is not a food for babies; but there is practically no other food which is complete for babies. If the mother's diet is inadequate in fruits and vegetables, the mother's milk is incomplete for a baby. Cow's milk. If a cow is fed on winter ensilage, cow's milk is markedly deficient in vitamines; if it is December, milk of a cow. There is practically no complete food.

I have understood the opposition have testified that there is nothing in Hebe that is deleterious; merely it is not a complete food, and its lack of completion is in part in the fat-soluble A vitamine.

Now, if by chance some ignorant mother were to feed her baby on Hebe, she would also by an equal chance be apt to feed the baby on everything else in the house, which is a very common thing, much more common than feeding the baby on Hebe.

What are these other common foods she is apt to give the baby? Vegetables, butter, both of which contain fat-soluble A to counteract the deficiency in Hebe. Therefore it seems to me almost impossible for any baby fed on Hebe to develop this laboratory disease of xerophthalmia.

I know no doctor who has even seen a case of xerophthalmia in a human being.

Now, in regard to fats that are fed to babies. The very best means of treating a vomiting baby we now have is feeding if thick cereal feeding. This consists of taking skimmed milk, sugar, some kind of farina and water, boiling it for half an hour, and this makes a semithick cereal food which babies who vomit easily can go on very well, and I have in practice fed babies upon a thick cereal feeding for five months without giving them any other food, but giving them orange juice, because the boiling we know removes the antiscorbutic vitamine, and I have had those [fol. 527] babies grow very well—without the faintest suggestion of xerophthalmia, whatever that is. I have heard of it in the textbooks but I have never seen it.

We also know when babies develop that form of diarrhea which is due to carbohydrate poisoning—I mean an exces-

sive amount of carbohydrate—we know the proper way to feed those babies is to feed them, if protein milk is not accessible, a food which is boiled.

Skimmed-milk feeding. Like Doctor Brennemann, I have kept babies on skimmed-milk feeding for several weeks, with great benefit to the baby. Now, boiled skimmed milk is identical with Hebe, except that it lacks the vegetable oil which has been proven to be not deleterious, so it is my firm opinion, and it is the opinion of 21 other doctors whose opinions I know in New York, that Hebe is not a baby killer. It is also my firm opinion that if I had any babies in whom I was interested, I would not have a laboratory worker feed them. I would have somebody who knew about babies feed them, and not let any laboratory worker in the world feed my babies.

I would like to submit in testimony this can of Eagle Brand condensed milk. It says on it, "The following directions have proved satisfactory through years of experience, though no set rule applies to all babies."

It says that in very small print. These opponents of Hebe, I believe, say they are not going to read the instructions, but in equally small print this goes on to say:

"First week, one-half teaspoonful Eagle Brand to 1½ ounces of water every two hours."

The modern teaching of pediatrics is that two-hourly feeding in the majority of cases is bad pediatrics, even in the first week of life. It goes on to say:

"Second to third week, one teaspoon Eagle Brand to 2 ounces of water every two hours; fourth to fifth week, two and one half teaspoonfuls Eagle Brand to 4 ounces of water every two hours."

In other words, for the first month they feed the baby every two hours. That is all I have to say.

Mr. Jackman: Let me suggest one or two things that may be of interest to the committee. In your experience in New York what do you find among the foreign population with reference to their reading of directions on cans?

Doctor Stimpson: The foreign population rather than read the directions on cans, go to find out. They take verbal testimony much more than they do reading testimony, I believe, and to get the verbal testimony they go to the child

milk station, of which there are 91 in New York City, or they are apt to go to their friends, or they come to doctors. But, as I say, that applies to about two-thirds of them. The remaining one-third read the directions on the Eagle Brand can; pretty close to one-third.

Mr. Jackman: What has been your experience, Doctor, with reference to the feeding of this Eagle Brand of condensed milk or any other sweetened condensed milk?

Doctor Stimpson: That there are a few babies that thrive on it and do very well. So also I have been a two months' old baby that was brought into the dispensary one day that had been fed on eight ounces of crude B milk undiluted every two hours, and the baby looked like a breast-fed baby.

Now, all babies differ very much. What is good for one baby, as I say, is not good for another; but in the majority of cases Eagle Brand produces a fat, flabby baby which, when it becomes infected with any disease like measles or whooping cough is much less resistant than a baby fed on more normal foods with a less high percentage of sugar.

Mr. Jackson: That is all, I think.

Mr. Bryan: How long have you been in practice?

Doctor Stimpson: May I ask who is questioning me?

Mr. Bryan: My name is Bryan, B-r-y-a-n.

Doctor Stimpson: Whom do you represent?

Mr. Bryan: Were you not here yesterday?

Doctor Stimpson: No; I came down last night.

Mr. Bryan: I represent the Borden Co. and several other parties.

Doctor Stimpson: What has the Borden Co. to do with this case?

Mr. Bryan: Who is doing the questioning?

Doctor Stimpson: You are; but I am asking you that.

Senator Kendrick: I think the witness should answer.

Doctor Stimpson: Should I?

Senator McKinley: Yes; answer the questions.

Mr. Bryan: You have not testified in court, have you?

Doctor Stimpson: This is not a court; this is a committee. I just want to know who is questioning me.

Mr. Bryan: How long have you been in practice?

Doctor Stimpson: Since 1914.

Mr. Bryan: Where did you graduate?

Doctor Stimpson: Cornell Medical College, New York City.

Mr. Bryan: What was your first experience?

Doctor Stimpson: With the New York Hospital, two years, as interne.

Mr. Bryan: What department of it?

Doctor Stimpson: Medicine. It also included baby service.

Mr. Bryan: How much of baby service?

Doctor Stimpson: Forty-five beds.

Mr. Bryan: What did you do after that?

Doctor Stimpson: I went to St. Louis Children's Hospital, where Doctor Marriott was, and was there acting resident of the children's service for a year.

Mr. Bryan: So you were under Doctor Marriott?

Doctor Stimpson: No; Doctor Marriott came out in September, and I left to go in the war when Doctor Marriott came out.

Mr. Bryan: How long were you in the Army?

Doctor Stimpson: Two years.

Mr. Bryan: And then came back and resumed practice?

Doctor Stimpson: In May, 1919.

Mr. Bryan: May, 1919?

Doctor Stimpson: Yes; that is right.

Mr. Bryan: Where did you go then?

Doctor Stimpson: Practiced in New York.

Mr. Bryan: When was it that you held all these positions that were referred to here?

Doctor Stimpson: I am still the school physician at the Horace Mann School; I have been there three years.

Mr. Bryan: How many hours do you give to that?

Doctor Stimpson: Two hours a day, school days only.

Mr. Bryan: Two hours a day?

Doctor Stimpson: No; about one and one-half hours a day.

Mr. Bryan: How much time during the last three years has been devoted exclusively to infant diseases and nutrition?

Doctor Stimpson: All of it.

Mr. Bryan: What proportion of it was devoted to nutrition and what proportion to disease?

Doctor Stimpson: That is a question I can not answer.

Mr. Bryan: In other words, your practice has been principally in the diseases of children, has it not?

Doctor Stimpson: What comes along, but in children, particularly in children under 2 years of age, the problem is nine tenths nutrition.

Mr. Bryan: Now, you said you had never heard of any children being fed with Hebe, and none of these other doctors you referred to ever heard of it either. Do you know —which is the fact—that there are other milk compounds on the market similar to Hebe, which have the same constituents?

Doctor Stimpson: Yes; I would like to say right here there is a compound on the market at the present time known as S. M. A. which is based on the formula of a professor of pediatrics at Cleveland now, Doctor Gerstenberger. I do not know that it has already been brought out in testimony, but it has only recently been sold outside of Cleveland. The statistics of this food used in Cleveland is that it is probably the best artificial food that has ever been found for babies. Now, S. M. A. is a food in which, in order to have a chemical food similar to mother's milk, Doctor Gerstenberger has taken a combination of animal and vegetable fats so that he can have a food which reacts to the digestive organs as closely as possible to mother's milk. To this food he has added a little cod-liver oil to take care of the rickets and fat soluble vitamines, and this food is now on the market for general distribution. It is probably the best artificial food for infants on the market to-day, and I understand it will also be affected by this Voigt bill.

Is that an answer to your question?

Mr. Bryan: Doctor Gerstenberger testified before the committee.

Doctor Stimpson: Oh, he did?

Mr. Bryan: He told of that. Furthermore, an amendment has been prepared which will eliminate the application of the law to S. M. A.

[fol. 528] Doctor Stimpson: How does the amendment read?

Mr. Bryan: I do not know.

Doctor Stimpson: But you are going to pick on Hebe still?

Mr. Bryan: We are not going to pick on anybody. You approve of Hebe, don't you?

Doctor Stimpson: I have no objection to Hebe; that is the point.

Mr. Bryan: What connection have you with Hebe?

Doctor Stimpson: None at all. I never heard of Hebe until last Thursday.

Mr. Bryan: When did these doctors tell you this?

Doctor Stimpson: Last Thursday.

Mr. Bryan: Did you ask them whether they had ever used any other milk compound than Hebe?

Doctor Stimpson: I did not. I know some of them have occasionally used Eagle Brand, because there are isolated cases that seem to benefit from Eagle Brand when properly used in the hands of a doctor.

Mr. Bryan: You are getting away from the question. You are arguing the case for the Hebe Co., we understand, whatever the reason is.

Mr. Jackman: That is not a fair statement.

Mr. Bryan: I ask you whether or not you are familiar with the fact there are perhaps half a dozen milk compounds on the market other than Hebe which consist, like Hebe, of condensed skimmed milk and vegetable oil without the cod liver oil which, as you say, makes S. M. A. a proper food? Did you know that or didn't you?

Doctor Stimpson: No; I did not know that.

Mr. Bryan: So you did not ask these doctors whether any other milk compound than Hebe was being fed to babies?

Doctor Stimpson: No; I did not.

Mr. Bryan: I see.

Doctor Stimpson: May I add, though, that if the composition of any of these other milk compounds was definitely known it is my opinion that I would be perfectly willing to use them for infant feeding provided they contained nothing extraneous more than Hebe does, provided I knew what was in it and what proportion was in it, because, as I say, no one food is a complete food for babies, and every food for babies has to have some additional food added to it.

Senator McKinley: I think perhaps the time of the committee is too limited to go into these side discussions.

Mr. Bryan: I merely want to have that in the record, sir. That is all.

Mr. Jackman: You referred to this milk and sugar as a compound when you answered Mr. Bryan's statement.

Dr. Stimpson: I did not understand that.

Mr. Jackman: You spoke about this Eagle brand, which consists of milk and sugar. You referred to that as a compound?

Doctor Stimpson: It seems to me it is just as much of a compound as milk to which something else has been added.

Mr. Jackman: That is all.

Senator McKinley: Thank you.

Mr. Jackman: Doctor Carlson, who is the professor of physiology at the University of Chicago.

May I ask, Mr. Bryan, if you desire Doctor Stimpson to remain here?

Mr. Bryan: I think not.

Mr. Jackman: Does the committee desire the doctor to stay here?

Senator McKinley: No.

Statement of Dr. A. J. Carlson, Chicago, Ill.

Doctor Carlson: A. J. Carlson: I live in Chicago, and I have been connected with the University of Chicago for 18 years and am professor of physiology and director of the laboratory of physiology. I have myself and with my students done nutrition work on animals, proteins, and the vitamines.

I served two years in the Army as a lieutenant colonel in the Sanitary Corps, Division of Food and Nutrition; a year and a half of that time I was abroad. After the armistice I was assigned to the American Relief Administration and under Hoover became the first director of European child relief feeding work and outlined the diets and picked the personnel that instituted the child feeding in Yugoslavia, in Austria, Czechoslovakia, Poland, Lithuania, Latvia, and Finland, and later, at the direction of Hoover, went to the field in those countries to investigate the nutrition conditions of the children and the adequacy of the rations provided.

Mr. Chairman, I understand this bill prohibits in interstate commerce any preparation of skimmed milk to which has been added fat other than butter fat. Is that correct?

Mr. Jackman: That is correct, if it is in the semblance of milk. But you can put a little coloring like cocoa in under this bill, and it passes.

Doctor Carlson: But the point is it, prevents in interstate commerce a compound of skimmed milk plus any other fat than butter fat, and the argument for it is one of the danger of such a compound to public health, and the only danger, as I understand from the testimony that I have

read, is lack of or a diminshed amount in such a compound of vitamine A.

Now, I would like to take up the public-health aspects of the lack of this vitamine A. In the first place, to my knowledge—and I think I know the literature pretty well on nutrition—and in my own observation, there is no recognized problem from the point of view of health of children or adults in the United States to-day from lack of vitamine A.

This eye disease has been referred to. I do not know of any authentic case of this eye disease, xerophthalmia, in the United States. Reports of it have been given in some places in Europe and in the Orient. I want to state this, however: In my investigation during six months in the war-devastated areas of Europe I saw all kinds of malnutrition, thousands of cases, due to inadequate quantity and quality of proteins, but I saw not a single case of xerophthalmia.

I should like to state to the committee that it is not yet agreed among scientists as to the relation of this eye disease to vitamine A. The fact is that when we make an artificial diet as free as we can make it of vitamine A and feed it to rats and to some other animals—dogs have also been experimented on, although we have no experience with dogs—when it is fed to rats these rats then begin to go down and fail to grow and a certain percentage of them develop this eye disease and others do not, and they go on from malnutrition to the point of death with perfectly clear and good eyes.

Now, I am aware that Doctor McCollum and others are firmly of the opinion that xerophthalmia is a disease due to lack of vitamine A, but in my judgment—and I believe I have some scientific standing, if I say it myself—the case is not yet proved. We must yet clear up the fact that a certain proportion of the experimental animals do not develop this disease, although they go to the point of death from apparent lack of this vitamine.

The second point I would want to make is this, that in such feeding experiments on rats, if we take the protein in skimmed milk and feed all the protein that the rat requires for its normal nutrition without purifying that protein or casein—that is, we take the skimmed milk and precipitate the protein out as a cheese and feed that skimmed milk cheese to the rat—in all our experience in Chicago, it

has been impossible to produce any deficiency either in growth or in evidence of disease of the eyes.

I am perfectly aware that there might be specimens of milk—winter milk, for example—that might not yield this, because it is well recognized, of course, that the milk varies in vitamine content according to the food of the cow or the mother, but in the milk that we have used it is necessary to purify these caseins, by either an alcoholic extraction, not only once but twice and three or four times, so thoroughly does this vitamine A cling to the protein; but so far as the rat is concerned, so abundant is it in skimmed milk that it hangs to that protein of the skimmed milk.

This committee needs no instructions or suggestions from me, but I think we all will agree that no question of science is settled by the experience or experiments of any one man or any one laboratory. I have read Doctor McCollum's testimony and his experiments, and I do not believe that they are adequate to settle the point of absence or grave deficiency of vitamine B in this particular compound that he experimented on.

Mr. Jackman: You mean vitamine A, do you not?

Doctor Carlson: Vitamine A. That is the only one concerned before us, because the other vitamines are not involved.

We could make a comparable experiment. Suppose we took a milk or a butter very rich in vitamines and then added just a sufficient amount of that milk to keep the rat in good nutritive condition; then if you get a small amount of fresh milk, winter milk, if you please, or even summer milk of a bran-fed cow, and that same milk which had three [fol. 529] or four times less vitamines than the original, and added the same quantity of milk, obviously those rats would show deficiency, although they got pure fresh milk.

Speaking as a scientist and as a person who is primarily interested in public health—that is my prime consideration; there is not any individual concern, small or large, that should stand in the way of a real public health measure, but I am going to point out to you in a minute, in my judgment, that this bill is detrimental to public health.

What I was going to say is this: The Congress here has two sources of impartial and independent information. One is the National Academy of Sciences, which is an official advisory body to the Government on scientific questions; the other is your own Bureau of Chemistry in the

Department of Agriculture. If the report of this committee on this bill should in any way be swayed by Doctor McCollum's experiments, I think it is fair to state that these should be repeated and confirmed by at least two or three independent laboratories, and that could be done either under the National Academy of Sciences or under the direction of the Bureau of Chemistry of the Department of Agriculture. Done either way or by both, Congress would be well advised, and I believe scientists and the general public would accept the results.

I stated a minute ago that from my point of view—and I might say here that I have never appeared before a legislature or any court for any private corporation whatever, but I have helped the Federal Government in certain lines in the enforcement of the pure food law—I beg to make the point here that there is present in this country, I think, a vitamine hysteria, and the press and others are catering to the popular notion that when you have taken the cream out of milk then you have taken most of the nutritive value out of milk. That is, unfortunately, a common notion, so common that we speak of skimming the cream out of this, that, and the other thing, and when you have taken the cream out of the business you have done the business to death. That is merely an application of the common superstition.

It is a well-established fact that all scientists and dieticians will agree with me on, that proteins in the milk are as important, if not more important, than the fats, and the protein in the milk are what are known as complete, adequate proteins.

I take it that any law which would hamper the saving of this enormous amount of perfectly splendid protein in the milk and hamper the use of that for human food is detrimental to the public health.

I was informed by a big casein manufacturer a year ago that casein, which is the milk protein, goes into the industries to make buttons and other things, paints and varnishes, in the country to the extent of about 5 pounds per capita per year. Now, that is detrimental, gentlemen, to the public health.

Of course, we all agree that if the milk can be gotten to the consumer and consumed fresh it is the ideal thing, but where this can not be done profitably commercially, where we have to rely on canning or condensing in various ways, obviously the thing to do from the point of view of states-

manship, if we are actually actuated by the feeling of health welfare of the Nation as a whole, is not to cut short the possibility of extending the use of skimmed milk but to actually look toward a better way of getting it to the table of the human being.

I believe those are the main points that I want to make; namely, that there is no problem of vitamine A deficiency in this country to-day, so far as I know, so far as recognized. There are other nutritional problems, to be sure, under nutrition in quality and quantity in other directions, partly due to ignorance and partly due to poverty. We all agree that skimmed milk contains no deleterious ingredients. It contains several very excellent ingredients—the perfect proteins, casein, and lacalbumen and salts—and that the bill, based partly on incomplete and inaccurate experiments, will not, in my judgment, pass, particularly since it will hamper the desirable aim of all nutrition experts and all those who really look at the public health from a broad statesmanship standpoint. It will hamper the education of the public in the proper nutritive value of skimmed milk.

Mr. Jackman: Do you want to ask any questions, Mr. Bryan?

Mr. Bryan: No questions.

Mr. Jackman: Thank you, Doctor.

Senator Ladd: I want to clear up a few points in my own mind, Doctor. I infer from your statement that you feel that the question of the vitamine A has been overemphasized?

Doctor Carlson: Not only vitamine A, Doctor Ladd, but all of them; and the unscrupulous commercial people are trading now on that hysteria, and no one knows better about that than Doctor McCollum, who has shown that many of their products are nothing but fakes. It has been overemphasized in this way, that unless poverty or ignorance prevent a varied diet vitamine A is so universally distributed in large amounts and in small amounts in many of our common foods that there is no vitamine A problem.

Senator Ladd: Of course, so far as the infant is concerned, they only have a single food?

Doctor Carlson: Yes and no. That again depends, of course, on the purse of the parents or on the amount of knowledge of the parents.

Fruit juices, I think, in the best infant dietaries are started very early. And, again, I might say, Doctor Ladd, that all fruit contains a great deal of vitamine A.

Senator Ladd: That is what I wanted to get at.

Doctor Carlson: Yes; it does. May I supplement my answer to your first question?

Senator Ladd: Yes.

Doctor Carlson: This is something that has not yet been reported. If we examine the urine of people fed on the ordinary diets there is abundance of vitamine A in the urine, so that you can feed a rat on an absolutely vitamine A free diet and add an alcohol and ether extract of human urine and he would thrive splendidly. That, in my judgment, means that we are getting so much vitamine in our ordinary varied diet that it runs over, spills over, as it were, into the urine, because if a person goes on a period of absolute fasting, taking nothing but water, then vitamine A nearly completely disappears from the urine.

Senator Ladd: My other question was: Do I understand that after the fat has been removed from the milk there still remains a sufficient quantity of vitamine A?

Doctor Carlson: That answer will have to be qualified. Answered first on the basis of our own experience with rats—we have had no experience on this with human beings—there is not only enough vitamine A in skimmed milk for the rat, if it is given the whole skimmed milk—the skimmed milk which we have worked with, which is centrifuge skimmed milk—but you can precipitate the protein, the casein, the cheese, throw the rest away, and add to the diet from 12 to 18 per cent of that casein and the rat goes on growing.

And we have had this experience, Doctor Ladd, that we have washed this casein twice with ether and alcohol, but there was still enough of it there to prevent us from getting the deficiency we were looking for. But that is with a rat.

Senator Ladd: There was another point that was a little clouded—not in your testimony. I was not here at the close of the other testimony. What is the effect of the heating of the milk to condense it on vitamine A?

Doctor Carlson: I had intended to touch that point in my original statement. Heating itself appears to have only slight effect in destroying the vitamine, but heating plus air, if air is present, leads to oxidation, and the higher

the heat the more rapid the destruction, or the longer the heat the more rapid the destruction.

Since you raise that question, Doctor Ladd, I would like to say that there is a discrepancy between the testimony of the Hebe people and the experiments of Doctor McCollum. The Hebe people last week, when Mr. McKee conferred with me—and they had given the testimony here—Mr. McKee said that the method of preparation so far as heat, duration of heat, etc., and steam, etc., of Carnation condensed milk——

Mr. Jackman (interposing): Evaporated milk.

Doctor Carlson: Carnation evaporated milk and Hebe is the same so far as heat, duration of heat, is concerned. Now, if that is the case and they started with the same sample of milk containing the same amount of vitamine, there should be about half as much vitamine A in Hebe as in Carnation evaporated milk.

But here comes in, of course, another factor of age. There is some deterioration by age, and it probably would be more valuable from the point of view of the public health, Mr. Chairman, to have the date of canning on the can.

Senator Ladd: One other point that has not been brought out, I want to get a little evidence or information on. What with regard to the relative values of the two fats, [fol. 530] butter fat and coconut oil, if that is the one that is generally used? That has not been touched on thus far, when I have been in the room. Perhaps it was when I was out.

Doctor Carlson: That is a very difficult question to answer, Doctor Ladd, but so far as I know it can only be answered in part on the basis of experiments, and those experiments are too short to be absolutely conclusive. Now, one can see—and it has been done in our own Bureau of Chemistry in the Department of Agriculture here by Doctor Longworth; he has fed coconut fat—and that is that it is .97 per cent, or around there, practically completely digested and absorbed. So far as the energy value or calorie value of the two, they are about the same. There is no difference there, and you can see, then, so far as digestability is concerned it is the same. But the scientists are getting mighty careful nowadays about saying that this food is equal to that in nutrition, because we do not know, apparently, the chemistry of all the constituents in the food.

Senator Ladd: Butter fat contains about 12½ per cent of volatile fatty acids.

Doctor Carlson: Yes.

Senator Ladd: What percentage is contained in the coconut-oil fat?

Doctor Carlson: I am not competent to answer that. I have made no analysis of the coconut fat. I answered it from the point of view of utilization in the body.

Senator Ladd: Do the vegetable fats as a rule contain very much of volatile fatty acids?

Doctor Carlson: Not as a rule; no.

Senator Ladd: And is it your judgment or opinion that the volatile fatty acids in the butter fat serve any useful purpose in nutrition?

Doctor Carlson: So far as I know, Doctor Ladd, all the fatty acids are utilized almost completely in the healthy individual, both in oxidation to yield energy and in reconstructing the fat molecules to build up their own body fat. We have fats of various compositions in these ordinary fats and in the different kinds of animals, of course.

Senator Ladd: There is a general feeling, is there not, that the volatile fatty acids in the milk fats do serve a useful purpose, otherwise—we might put it this way—nature would not have placed them there. That might be one way of reasoning. What I want to do is to get your views before this committee.

Doctor Carlson: I would agree with you on that. They serve a useful purpose. There is no question about that, I think.

Senator Ladd: And is the absence of them in the other fats a detriment?

Doctor Carlson: Now you are getting back to the original question.

Senator Ladd: Yes.

Doctor Carlson: And I do not believe, Doctor Ladd, that we could settle that by any experiments on the rat or on any other animal except man, and I do not believe an experiment over three months or six months, or even three years, would settle it. It has got to be a very long experiment, because things that are detrimental might not act in a few months' experiment with a man.

Senator Ladd: Is it true that the milk of all mammalia contains volatile fatty acids?

Doctor Carlson: So far as I know that is correct, although the fats vary and the proteins. There is a great difference in the ingredients. In other words, there is as great difference in the milk of the different mammalia as in the blood of the different mammalia. No one knows that better than you, Doctor.

Senator Ladd: I think that clears up the points I wanted to get your views on in the record.

Senator Kendrick: Doctor, you spoke of relief work in the different countries of Europe a little while ago. Were all your supplies of foodstuffs drawn from our own country and shipped over to Europe?

Doctor Carlson: Yes, sir; the materials that could not be gotten there. Now, where we could get fresh vegetables and cereals we did not import them.

Senator Kendrick: Do you recall whether or not you used any of this preparation, either condensed milk or this Hebe brand?

Doctor Carlson: We used plenty of condensed milk, because that was one of the big items for undernourished children. We used plenty of condensed milk, but to my knowledge not a can of Hebe, and if I had heard of Hebe at the time—I never had heard of Hebe until last week—I certainly would not have put it on the ration, and I would never have put condensed milk on the ration, sir, if I could have gotten fresh milk, but there was the question of doing the best one could with the things available under almost impossible conditions.

Senator Ladd: I think you ought to make clear one point there. You say if you had known of Hebe you would not have put it on the ration. I want you to make that statement a little clearer by giving your reason.

Doctor Carlson: My reason is that if I had known of Hebe and the statements in the testimony of the difference in price, the cheaper price would not have influenced me. I would have put in the condensed milk containing the high vitamine A content on the chance that they were on the ragged edge over there on vitamines.

Senator Kendrick: In other words, your idea would have been that the difference in cost would not justify you in using the article containing less nutrition?

Doctor Carlson: Less nutrition in——

Senator Kendrick (interposing): You would have preferred to have taken the better quality?

Doctor Carlson: I would.

Senator Ladd: Taking the product that you know by experience was safe?

Doctor Carlson: Absolutely; but the question did not come up.

Mr. Jackman: When you speak about using condensed milk over there, we know condensed milk in trade as a milk containing sugar and we know evaporated milk as a milk from which the water has been extracted and containing no sugar. Did you use evaporated milk or condensed milk?

Doctor Carlson: We used evaporated milk whenever available, sir. I am glad to have that correction made; but sometimes in order to throw things in fast we used Army supplies over there that were available, and the fact is, gentlemen, when you come to wholesale starvation like that you can not stop on these things. You have got to throw in whatever is available at the time.

Mr. Jackman: That is, you have got to fill them up?

Doctor Carlson: Yes. It was largely a question of general starvation from lack of energy and lack of protein, and I saw no single case of a distinct vitamine A deficiency. There was plenty of rickets, but I think it is already in the testimony, Mr. Chairman, that the relation of vitamine A to rickets is absolutely an open question.

Mr. Jackman: Has cane sugar the vitamines in it, or beet sugar?

Doctor Carlson: I have never experimented with the sugar, but my information is to the effect that perfectly pure sugars do not have them; that the sirup from which it is made has them, but in the refining it is lost.

But here again one must qualify his statement, because the substance is not chemically identified. We know it only by its effects on animals; but when it comes to small quantities it is very difficult to say whether it is present or absent, because this is a peculiar fact, that if you take six rats of the same litter, the same age, of the same inheritance, and put them on exactly the same deficient diet they do not show deficiency to the same degree.

Mr. Jackson: Doctor, this bill states—if I state it incorrectly, will you correct me, Senator McKinley—this bill states that a compound such as Hebe, which consists of evaporated skimmed milk and coconut fat, is declared in the language of the bill to be deleterious and adulterated. Now, do you agree with that as a fact?

Doctor Carlson: Adulterated, I think, is a matter of definition by law.

Mr. Jackson: Well, "adulterated," as I understand it, means something added which is deleterious.

Senator Ladd: Not necessarily.

Mr. Bryan: Absolutely not.

Doctor Carlson: If you defined "adulterated" according to statute, then I could not answer it, because by statute you can declare anything.

Mr. Jackson: I am asking you not as a lawyer, but I am asking you as a food expert.

Doctor Carlson: Well, as a food expert I have some common sense and, of course, some general knowledge, and I do know that the term does have a legal bearing. Now, if you ask me what the common view of "adulterated" is, that would to the average mind convey the idea of something injurious.

Mr. Jackman: That is what I have in mind.

Doctor Carlson: Deleterious, as it stands, that requires qualification to be correct. It would be deleterious by deficiency if you selected a brand of original milk, winter milk, [fol. 531] that was very poor or practically free from vitamine A, and then fed this Hebe exclusively, and nothing else, over a number of months or years, but in the ordinary common horse-sense application of food not deleterious.

Mr. Jackson: That is what I had in mind. That is all.

Senator McKinley: Any questions, Mr. Bryan?

Mr. Bryan: Just one question. Doctor Carlson, Mr. Jackman has asked you as to the meaning of the word "adulteration." Now, is it not a fact, or do you know whether the definition of "adulteration" contained in the Federal pure food and drug act and in the various State statutes which are based on it, defines "adulteration" as a deleterious mixture?

Doctor Carlson: Well, sir, I have read the food and drug act several times, and I have helped the Government in the execution of its provisions, but I do not remember the definition of "adulteration."

Mr. Bryan: I just want to cite this point: The definition of the term "adulteration" as contained in the statute is:

"That for the purposes of this act an article shall be deemed to be adulterated—

"First. If any substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality, strength, or purity.

"Second. If any substance has been substituted wholly or in part for the article.

"Third. If any valuable constituent of the article has been wholly or in part abstracted.

"Fourth. If it be mixed, colored, powdered, coated, or stained in a manner whereby damage or inferiority is concealed."

Now, under that definition, Doctor, a mixture of milk and water would be adulterated, would it not?

Doctor Carlson: No, sir.

Mr. Bryan: It would not?

Doctor Carlson: No, sir; it would be adulterated if sold for milk, but if sold for what it is how could it be adulterated?

Mr. Bryan: So any article which is given a name different from what it originally bore can be sold without violating that statute; is that your idea?

Doctor Carlson: My idea is that if Hebe was sold as milk——

Mr. Bryan (interposing): That is not the question.

Doctor Carlson: If it was sold as milk, it would be adulterated under that definition. But it is sold as a milk compound.

Senator Ladd: I want to get a little clearer on one point there, Doctor. Do I understand you to say if milk contains added water and it is sold that it is not an adulterated article?

Doctor Carlson: Yes; by statute it would be; that is a fact. I think the statute fixes the percentage of water in milk and adding more water would lower the quality.

Senator McKinley: Did you not answer that if it was sold as milk it would be adulterated?

Senator Ladd: Whether sold as milk or not, if it is sold to take the place of milk it is adulterated.

Doctor Carlson: Not in my judgment.

Mr. Jackman: No; I will show you the rulings of the department.

Senator Ladd: We do not depend entirely on rulings of the department.

Mr. Jackman: First you must establish a standard. If you establish a standard for a compound, then if you take anything out of that you have adulterated it.

Senator Ladd: Or if you add anything to it.

Mr. Jackman: That is true under the statute, because you sell it as milk.

Senator Ladd: You come along as the milkman and sell it to me, and I do not ask you any questions.

Mr. Jackman: We fix a standard and say it must be to such a degree, and anything that differs from that degree and is sold as milk would be adulterated, but if I sell you that thing with all the butter fat out, as skimmed milk, it would not be adulterated.

Senator Ladd: But if you add water to it.

Mr. Jackman: There is no question about that being adulterated under all the statutes in practically every State in the Union. Here is a compound consisting of certain elements.

Senator Ladd: When you sell it as milk there are no questions asked, and it is adulterated.

Mr. Jackman: Surely.

Senator Ladd: And you are prescribed.

Mr. Jackman: Surely.

Senator Ladd: And will be stopped every time?

Mr. Jackman: Surely.

Senator Ladd: And ought to be. I did not want to leave that in the shape it was left in.

Mr. Jackman: But compounds——

Senator Ladd: I am not talking about compounds.

Senator McKinley: I do not think he answered the question as you thought.

Senator Ladd: He said it was adulterated if water was added.

Doctor Carlson: And sold as milk.

Senator Ladd: But it is sold and you do not ask any questions about it. It is delivered at your house.

Doctor Carlson: Yes; if it is sold as milk it is adulterated. I do not know anything about law, but that would be my interpretation of the definition there. If they added water and labeled it and sold it——

Senator Ladd: That would be another thing?

Doctor Carlson: Yes.

Senator Ladd: I raise no question on that.

Senator McKinley: Mr. Bryan.

Mr. Bryan: That is all. In view of Mr. Jackman's statement that adulteration carries the idea of being deleterious I just wanted to read into the record the definition contained in the Federal statute, which has nothing to do with the idea whether the article is deleterious or not.

Mr. Holman: The opposition has consented at this time for us to put on one witness who will take only a short amount of the time of the committee, as he has to take an early train.

Senator McKinley: All right, it is agreeable to us.

Mr. Holman: Prof. O. Erf, of the University of Ohio, for the proponents.

Statement of Prof. O. Erf, of the University of Ohio

Mr. Erf: My name is Erf, professor of dairying of the Ohio State University.

I came here just simply to state this fact: That we want to refute—I want to refute—that there is any conspiracy on the part of the Borden people, because we have passed legislation some nine years ago prohibiting the sale of Hebe or any compound. We did not know anything about Borden's situation then. I just want to call your attention to that.

Senator Ladd: That is, in the State of Ohio you have reference to?

Mr. Erf: The State of Ohio; yes.

Senator McKinley: You did not know anything about Hebe, either, did you?

Mr. Erf: How is that?

Senator McKinley: Hebe, I think the testimony shows, is 6 years old, and you are talking about nine years ago.

Mr. Erf: Hebe is older than that.

Mr. Jackman: Oh, no.

Mr. Erf: When was the Ohio decision?

Mr. Jackman: In 1919, January 29.

Mr. Erf: The case came up during Camp Willis's installation, and that was in 1913, and Hebe was put in the camp at that particular time, because that brought up the difference, the strife that we had.

Mr. Jackman: In 1913?

Mr. Erf: Camp Willis. It may be 1914.

Mr. Jackman: Long after that; 1917, during the war.

Mr. Erf: Camp Willis——

Senator McKinley (interposing): The reason I mentioned it was I thought you were perhaps making a mistake, because you mentioned Hebe immediately there.

Senator Ladd: I want to clear up one point. Was any product put on the market or made similar to Hebe by that company before that date?

Mr. Jackman: No, sir.

Senator Ladd: Before they put Hebe out on sale?

Mr. Jackman: No, sir.

[fol. 532] Senator Ladd: I just want to get that clear.

Mr. Erf: Hebe was put into Camp Willis, and Camp Willis was established during the Mexican strife, at Columbus, Ohio, and that was before the war. I want to call your attention to that fact. I have not just exactly the data here as to the exact date, but that was the time when we began to fight Hebe, and Hebe was on the market at that particular time.

Senator McKinley: It was 1916 the troops were ordered out on the border.

Mr. Erf: No; I think it was 1914 when the camp was established. At any rate, Hebe was manufactured in a small way in Cincinnati quite a long while ago, a compound of skimmed milk and butter fat.

Mr. Miller: Butter fat?

Mr. Erf: Coconut oil. We do not want it to appear here that Camp Willis was established in 1917, because that was during the war. This was—the national war—and this was before the war. I am really surprised that these people should interfere, because this has been on the market a long while, Hebe has.

Senator Ladd: Let me ask you a question. You mean that Hebe, under the name of Hebe, has been on the market for a long time, or that some preparation having the character of Hebe has been on the market a long time? I want to get the record clear as to your view.

Mr. Erf: At the time we prosecuted, Hebe was the thing——

Senator Ladd: That you prosecuted?

Mr. Erf: Yes, sir.

Senator Kendrick: What was your Camp Willis established for?

Mr. Erf: For the Mexican trouble.

Senator Kendrick: Was that before the National Guard was sent to the border?

Mr. Erf: That was before the National Guard was sent to the border.

Senator Kendrick: Was not that in the year 1916?

Mr. Erf: Well, I have not the data here, but it was about that.

Senator Kendrick: 1915, a newspaper man says.

Mr. Erf: Well, the date can easily be supplied. The facts are that since that time Hebe has not been sold in Ohio.

Senator Kendrick: And it is your contention that the Borden Co. did not figure in the influencing of the Ohio Legislature in passing its law prohibiting the sale of it?

Mr. Erf: Absolutely, because we knew absolutely nothing about Borden at that particular time, what their standard was.

I have been listening to a certain extent about the nutrition side of this problem. It is not a nutrition problem so much as it is a problem of commerce and economics, and in the decision between Hebe and Shaw the question presented here of whether or not the manufacture or sale of an article in and of itself wholesome and not hurtful may be prohibited for the reason that it falls within a class of articles the sale and manufacture of which as a whole may be detrimental to the public health and may be the basis of fraud and deception, and may, therefore, be prohibited; the fact of it is that before the trial the milk inspectors and the dairy food inspectors went over the State and collected a good deal of evidence. Previous to that time it was agreed that this compound could be sold in Ohio, giving permission, but after the inspectors came back and reported the situation, that it was sold as a food for infants and sold as milk, and then, furthermore, when it was discovered that the quartermaster bought condensed milk for the camp and it was discovered that they furnished Hebe in place of condensed milk, the court decided that it was probably best to put it off of the shelves of the groceries.

I really think—whether it was due to the Hebe Co. I do not know, but the man that furnishes a food product other than the natural product to our soldiers I think is doing really a mean thing, and the court decided that way.

Now, it is not so much a question of vitamines A or vitamines B as it is that this product when thrown upon the market produces a surplus, it lowers the price and drives

the dairyman out of business, and when they are driven out of business you can not get milk, and consequently the consuming public has got to suffer. Now, there is your point.

The doctors who have testified here have revealed the importance of milk, and we want to save the industry and do it honestly and legitimately. I personally have no interest either way. It makes no difference which way it goes, financially at least. I am simply stating the facts as we see them from an economic standpoint.

Senator McKinley: You feel that it is detrimental to the dairy interests?

Mr. Erf: Consequently it reflects back onto the consuming public.

Senator McKinley: Certainly.

Mr. Erf: There is your study. I do not know that I have anything else to add. I want to make my statement brief.

Senator McKinley: Thank you.

Mr. McKee: Am I at liberty to ask a question?

Senator McKinley: Certainly.

Mr. McKee: Do you know what percentage of the whole milk produced in 1924 was used in the manufacture of these compounds?

Mr. Erf: The what?

Mr. McKee: The percentage of the whole milk produced in the United States in 1924 used in the manufacture of compounds?

Mr. Erf: No; but the fact is that if you keep on there must be some limitation somewhere. If you keep on you will constantly deteriorate this business. It does not make any difference whether you produce this in a small way now, eventually the economic conditions will be such that it will demoralize the general industry.

Mr. McKee: Would you be surprised to know that less than a fraction of 1 per cent of the total milk produced is used in the manufacture of these compounds?

Mr. Erf: I grant that is true, because 5 per cent only goes into condensed milk, I think.

Mr. McKee: So you would not say at this time it was in any way threatening the dairy industry?

Mr. Erf: There is a larger percentage—I did not quite understand your point.

Mr. McKee: I ask you if, in view of the fact that the very small percentage of the total raw milk produced in the

country was used in the manufacture of this compound, you would say now it was a menace to the dairy business?

Mr. Erf: I will say that it will be, and will shortly be.

Mr. McKee: You say that in view of the fact it is 92 per cent a dairy product?

Mr. Erf: Yes, sir; I do, because we have had experience with other products and we know.

Mr. McKee: Professor Erf, you made the statement that the Ohio Legislature nine years ago passed a law prohibiting the manufacture and sale of compounds of evaporated skimmed milk in Ohio?

Mr. Erf: The Ohio courts, not the Ohio Legislature.

Mr. McKee: The legislature never legislated upon this subject, to your knowledge?

Mr. Erf: The legislature did pass upon that quite a number of years ago, and it did it in the face of these various commodities that were put upon the market at that time; particularly, Cyntho was one of the commodities, a mixture of lard and skimmed milk.

Mr. McKee: Professor Erf, you were a witness, were you, in the suit of the Hebe Co. *v.* Shaw?

Mr. Erf: Yes, sir; I think so.

Mr. McKee: Do you not know, from that testimony, that this product Hebe, which consists of a compound of skimmed milk and vegetable fat, made its first appearance in 1915?

Senator Kendrick: I will state, Mr. Chairman, the witness corrected the date when we called his attention to the mistake. The way I happened to be informed on it is from the fact that there was a camp named for me during the same year as this camp was named for Governor Willis; so I was clear on that and called his attention to it, and I understood him to say he was mistaken in the date.

Senator McKinley: Just to save our time, if the committee agrees, I think the witness has testified he is not going into the technical question, but he believes it is detrimental to the dairy interests.

Mr. Erf: I do not care about the dates. I have given what the facts are. I said about; I did not know exactly.

Mr. McKee: I will desist from that line of questions.

Another question I would like to ask, Mr. Erf, is along the line of the question of competition. Do you know John C. Pretzman, an attorney of Columbus, Ohio.

Mr. Erf: Yes, sir.

Mr. McKee: He was interested in the Hebe v. Shaw case as counsel?

Mr. Erf: Yes, sir; he was one of the attorneys.

[fol. 533] Mr. McKee: Do you know whom he represented in that suit?

Mr. Erf: He represented the Ohio State Dairymen's Association.

Mr. McKee: Whom was he also counsel for at the same time and whom had he been representing?

Mr. Erf: I do not know, but we employed him on account of his milk knowledge and, as you seem to intimate—and I will make the statement clear here—that he probably was connected with the John Wilgie Condensed Milk Co., and the very fact that I want to present here, the John Wilgie Condensed Milk Co., after the meeting, says: "If this continues, we will have to go into the business ourselves," and I think they have gone into this business, again showing you the danger of the economic situation.

Mr. McKee: One more question, Professor Erf.

Mr. Erf: Yes, sir.

Mr. McKee: Do you know whether it is a fact that the John Wilgie Evaporated Milk Co. is now owned by the Nestle Food Co., of England?

Mr. Erf: My friend, I do not pay any attention to these corporations, because they are not interested—I am not interested in them.

Mr. McKee: You know that is the Nestle Food Co., however, do you not?

Mr. Erf: I presume so.

Mr. McKee: Do you know John C. Montgomery?

Mr. Erf: Yes, sir.

Mr. McKee: And he is resident director of the Nestle's Food Co., of England and America?

Mr. Erf: Well, I do not know, but I think so. I will take it for granted that you know.

Mr. McKee: I am asking you.

Mr. Erf: Well, I do not know.

Mr. McKee: You live in Ohio and know Mr. Montgomery?

Mr. Erf: Yes, sir.

Mr. McKee: I thought perhaps you might also know at the present time Mr. Pretzman is the personal counsel for Mr. Montgomery.

Mr. Erf: Well, now, I do not know about that.

Mr. McKee: Well, I will withdraw that.

Senator McKinley: I do not think that is necessary.

Mr. Jackman: I think there is one matter in this connection that ought to be straightened out about that legislation in Ohio. As disclosed in the record of the Supreme Court, it was legislation against the sale of condensed skimmed milk, and the Supreme Court in the case of Hebe against Shaw held that Hebe was skimmed milk, and that the addition of the coconut oil did not take it out of the category of the prohibition of that statute, and that the legislation was not legislation against a compound but legislation against evaporated or condensed skimmed milk, and by the court's construction was made to include this product.

Mr. Erf: The economic results were the same.

Mr. Bryan: I may say that is perfectly true, that at that time the compounds were not recognized for what they are at the present time; but that statute was the same as that of New York and Maryland and perhaps other States.

Mr. Jackman: Not New York.

Mr. Bryan: Certainly; the same as Maryland.

Mr. Jackman: Except Maryland permits the sale in 10-pound cases.

Senator McKinley: The next witness.

Mr. Bryan: What I want to say is that the courts have held, and the Supreme Court amongst them, that a prohibition against condensed skimmed milk can not be evaded by putting in some coconut oil and calling it a fancy name, and as a result of that Hebe is prevented in all States that have a law similar to that of Ohio.

Mr. Erf: That is correct.

Mr. Jackman: But the statute now before the committee does not prohibit the sale of condensed skimmed milk

Mr. Erf: I am referring simply to the economic side of this situation.

Senator McKinley: We appreciate that.

Mr. Bryan: Now, may I ask just one question?

Mr. Erf: Yes, sir.

Mr. Bryan: Did you have any contact in Ohio with filled cheese?

Mr. Erf: Yes, sir.

Mr. Bryan: Will you tell the committee something about that? It has a bearing on this general type of problem.

Mr. Erf: Well, I might say that this trouble was the outcome of a filled cheese prohibition law.

Mr. Bryan: Explain that, if you will, to the committee.

Mr. Erf: Well, certain individuals were experimenting on filling other commodities and they finally hit upon some of these commodities. It was not in particular at that time Hebe, understand, but it was various compounds. In fact, I was more or less interested in seeing how the experiments were being carried on and finding out whether they could produce anything that had the proper flavor, and this here, as a matter of fact, is the direct outcome of some of these experiments, and if I am right this particular product originally—not in the shape of Hebe—originally started in Cincinnati.

Mr. Bryan: Explain that. I think the committee would like to hear it.

Senator McKinley: Do you want any more, Doctor Ladd?

Senator Ladd: I do not think that bears particularly on it.

Mr. Jackman: It started in Jefferson, as a matter of fact.

Senator McKinley: That does not make any particular difference.

Mr. Erf: I beg pardon, this stuff was started before in Jefferson; it was made also in Washington.

Mr. Bryan: Did you have anything to do with the initiation of the Ohio legislation?

Mr. Erf: I had much to do with a good many of these problems.

Mr. Bryan: I mean drawing this particular bill. Did you have anything to do with that?

Mr. Erf: I was in conference with these people; yes, sir.

Mr. Jackman: I do not personally see that this filled cheese has much place in this investigation, but having been lugged in here I would like to ask the witness this one question for the benefit of the committee: It is a fact, is it not, that the difficulty with the whole of the so-called filled practice is that they put two wrappers on the cheese and when you cut a piece of cheese out of that cheese there is no label on it, so that the consumer did not know what he was getting, as there is a label on this can; is not that the fact?

Mr. Erf: Not necessarily, because in some cases the filled cheese was made with the stamp on it.

Mr. Jackman: And when the grocer cut that cheese and sold a piece of it, a three-cornered piece, if you please,

there was nothing on it to describe it as there is on a package of oleomargarine?

Mr. Erf: If it was a round cheese that was true, but there were square cheeses, and they had a stamp on them.

Mr. Jackman: But they exported that to England and in England they took the wrapper off that had the stamp on it and it had a wrapper underneath. That is the fact, is it not, and they sold it as cheese?

Mr. Erf: Well, the fact of it is that was used in connection with fraud, and the best thing is to eliminate these things and keep the products pure. That is what I am trying to tell the committee here. I want something to be kept pure. If you want to mix coconut oil and skimmed milk you have that privilege, but not to be sold on the market and sold as it was sold in Ohio before this court decision.

Mr. Jackman: Well, your idea is, then, that you would put the whole product as it comes from the cow, without any changes, into a can, except taking the water out of it?

Mr. Erf: Well, condensed milk is a pure product in itself and so is butter. There is no mixture with it.

Mr. Jackman: How about condensed skimmed milk?

Mr. Erf: Condensed skimmed milk is a product that is used to dilute and to adulterate in many instances, and consequently condensed skimmed is prohibited in retail packages or for retail consumption in Ohio, as it should be, and sold wholesale for manufacturing purposes.

Mr. Jackman: The chief use of condensed skimmed milk is by the baker, is it not, and the confectioners?

Mr. Erf: Yes, sir; and rightfully it should be used there and it is used there.

Mr. McKee: The consumers of their products get the skimmed milk in disguised form without the protection of a label eventually, do they not?

Mr. Erf: We know what bread is, and it is natural that it should have some milk in it. I am not arguing; I simply want to call your attention to the economic side.

[fol. 534] Senator McKinley: Thank you.

We will adjourn now until 2.30.

(Whereupon, at 1.40 o'clock p. m., the committee recessed until 2.30 o'clock p. m.)

After Recess

The committee reconvened, pursuant to the taking of recess, at 2.30 o'clock p. m.

Senator McKinley: Gentlemen, we will proceed.

Mr. Jackman: Dr. Charles J. Brinn, who is a practicing physician on the lower East Side of New York and the chief of the female medical department of Beth Israel Dispensary, medical inspector of baby health stations, and inspector of school children in New York City.

Statement of Dr. Charles J. Brinn, of New York City

Doctor Brinn: Mr. Chairman, I knew absolutely nothing about Hebe a few days ago. When I was asked if I knew anything about it, I said I never heard of the preparation in all my experience on the lower East Side of New York. I have never come across any baby being fed on Hebe.

I attend the public health stations on the lower East Side, and there we try as much as possible to absolutely do away with the use of any of the artificial preparations on the market. In other words, we just try as much as possible to keep the babies going on modifications of cow's milk.

The mothers come to our stations through various ways. Of course, the majority of them are very poor, and they can not afford to have their own physicians, and the city of New York has provided health stations so that these poor mothers could come in with their babies and get the necessary proper medical advice on how to feed their infants. We do not take any children above two years. We are responsible for children below the age of two years. Of course, we do all in our power to encourage breast feeding, because we believe that the best food for a nursing infant is mother's milk. However, when the children begin not to do well and there is some drawback on the mother's part, we resort to artificial feeding and that is a modification of the cow's milk. It is also called percentage feeding.

The way we get these mothers is this: We have canvassers that go around to the poor people of the lower East Side. They go into a tenement house, and they see a little baby, and they ask the mother if the mother attends the milk station. If she does, well and good; if not, she is told to come to the nearest milk station, and there are

a number of them in the lower East Side; in fact, more down there than in any other section of the city on account of the congestion.

So the mother comes down with her baby through one avenue, that is, the canvasser, to the milk station. There is another way the mothers come down to the milk station, and that is by being recommended by neighbors who know something about the milk station, who have had their babies treated there or who know of friends of theirs who have had their babies treated there.

Another way that the mothers have of coming down to the milk station is that they are recommended by their private physicians.

If a physician is called on to treat a baby that is not doing well and the mother can not afford to pay him to take care of the case, he recommends her down to the public health station. At times even the dispensaries recommended babies to public milk stations. And, as I said before, we try, as much as possible, to discourage babies receiving their food in the form of preparations like condensed milk and other similar condensed-milk preparations. As I said before, we only keep the babies going on modified cow's milk. As far as Hebe is concerned, I have never seen it used by any mother on the lower East Side, and I see quite a good number of mothers and children.

I have been practicing there now since 1915, and besides being with the health department of the city I have my own practice, and a thing like Hebe is absolutely foreign to these mothers there. I am sure if I were to ask any one of those mothers they would all say they do not know, because the stores where Hebe could be gotten do not keep this on their shelves. I know I have very many patients in mind where the groceries around them have no Hebe.

As I said before, when a mother notices her child is not doing well she will not go to the grocery store to ask for a formula or some food to give to her child; she will not even go to the drug store. No matter how ignorant a mother may be, she will not go to the drug store or to the grocery store to ask for advice regarding the feeding of her infant. She knows, or she is told through the various ways I have outlined to you, that the best place for her to go is to the milk station, and there she goes and there the child is taken care of.

As I said before, we try as much as possible to discourage the use of these proprietary preparations to take the place of cow's milk.

I have seen several babies who have been brought up on condensed milk and they look like some of these Mennen's babies that you see advertised. In our section of the city I do not know about other cities—why, the majority of them are babies who—well, to use the term, I believe they are waterlogged—that is, the excessive sweetening of the condensed milk and the preparation of it causes them to assume a certain flabbiness. They look fat, but they really are not.

A mother came to me one day and said she put her baby on condensed milk and she noticed that her baby gained. Of course he gained, but he did not gain in weight; he gained in excess fluid of the body.

As far as the nutritional value of these preparations in the feeding of infants is concerned, I can not state. All I can say is that I find from my own experience that the best form of milk to be given babies is mother's milk, and if that can not be gotten a modification of ordinary cow's milk. Under no circumstances do I allow a mother to give a baby any other preparation.

As far as the mother's intelligence is concerned I can not tell, but I know this one fact, that before a mother will use any preparation on her child, whether she is told to do so by the druggist or by the grocer or by a neighbor, she will always come to a doctor. If she can not get a private doctor, she will go to the organization doctor. There are organization doctors around my section—that is, every poor mother and father who have not what is known as a family physician joins an organization where they pay a very nominal fee as dues for a year, which entitles him to free medical attention for his entire family. Naturally, if a mother can not afford to call a private doctor she will call her organization physician, and he always advises taking the baby to the health station. The mothers do not read the labels on the bottles or cans, or whatever they get, because around my section they have a very superstitious nature. They will not believe what they are given. In fact, even with cow's milk I have great difficulty in convincing them the formula I give them is absolutely good for their babies. Many times they will

try to argue with me to give the baby a little more milk. They will come around and argue with me that the baby does not get enough, irrespective of the fact that the child has gained in weight every week. His weight is watched very carefully and we gauge our formulas according to the weight shown on the chart.

Mr. Jackman: Doctor, you speak about condensed milk. You mean the sweetened condensed milk?

Doctor Brinn: Yes, sir.

Mr. Jackman: Not the evaporated?

Doctor Brinn: Well, the condensed milk.

Mr. Jackman: Condensed milk has sugar in it. Is that what you refer to?

Doctor Brinn: Sweetened milk.

Mr. Jackman: What is the fact as to whether the babies on the East Side where your practice is, are breast fed, as a rule?

Doctor Brinn: As a general rule they are breast fed, because the mothers in that section are of the impression the longer they feed their babies the less chance they have of becoming pregnant. That is quite a prevalent superstition around the East Side. That is why you find mothers feeding their babies up to two and even three years old. I have had cases of babies who were breast fed up to three years by a mother who happened to have an abundant supply of milk.

Senator McKinley: Any questions?

Mr. Bryan: No.

Mr. Jackman: Dr. Casimir Funk of Columbia University, New York city, formerly connected with the Lister Institute of London.

Statement of Dr. Casimir Funk, of Columbia University, New York City

Senator McKinley: Give your name, please.

Doctor Funk: Casimir Funk, associate professor of physiological chemistry, Columbia University, and director of the research laboratory of Herman A. Metz, New York; formerly associated with the Lister Institute of London and the Pasteur Institute of Paris, University of Berlin, and Cornell Medical School.

[fol. 535] Mr. Jackman: For the benefit of the committee I may say that Doctor Funk is the man who coined the name of vitamine.

Doctor Funk: The reasons for the introduction of the Voigt bill prohibiting interstate commerce in filled milks are mainly based on a dietetic foundation, and to this subject I will limit myself here.

Filled milks nowadays are composed of skimmed milk and vegetable fat, the vegetable fat, usually being coconut oil, replaces practically an equal amount of cream.

The skimmed milk has been investigated as regards food value for quite a number of years, particularly in connection with hog and chicken feeding, and has been found of very great value there. The skimmed milk, as far as we can judge, contains all the proteins, carbohydrates and salts of the original milk. Skimmed milk contains also the vitamines with the exception of vitamine A, which is lost to an extent unknown to us.

I would say that the present feeding experiments to determine the content of vitamine A do not give a clue to us as to whether the skimmed milk contains 50 per cent or 75 per cent or 25 per cent of vitamine A.

Skimmed milk has been extensively used also in infant feeding. Doctor Brennemann pointed out when a number of babies were fed on skimmed milk for a number of weeks without any untoward results being observed in them.

Dr. Hess has made experiments with a diet composed of skimmed milk, cottonseed oil, orange juice, and yeast. This experiment was performed for the purpose of seeing if such a diet would produce rickets, but it indicates that the child can run along on such a diet for a fairly long time. The experiments were continued for seven months and at the end of that time no symptoms of actual deficiency had been observed. It does not mean, of course, that skimmed milk is a perfect food. It means only that it can be used safely for a number of weeks and perhaps even, in some cases, as I will explain perhaps later, for a number of months.

Now, what is the dietetic and chief scientific reason for such a drastic piece of legislation? A certain dietetic school, which is led by Doctor McCollum, of Baltimore, states that the filled milks are deficient in vitamine A and so are the vegetable fats which are used in this compound.

and the consumption of this compound would cause a serious vitamine deficiency in the form of xerophthalmia and stunted growth.

It is claimed that although Hebe is plainly marked to be used for cooking and baking, it could be sold fraudulently by the retailer instead of evaporated milk. It is my contention, however, that while certain brands of filled milk are perfectly adequate for infant nutrition depending on the way they are manufactured, this is not the case with evaporated milk, and I include evaporated and condensed milks in the same category in this case.

As determined in experiments on guinea pigs at least, most of the evaporated milks have lost a part of their antiscorbutic vitamine, and if an ignorant mother should get hold of such a product and feed it for any length of time, perhaps five or six months, the child would be in danger of scurvy, and, as Doctor Brennemann has said, perhaps also in danger of rickets.

Therefore, if the Voigt bill was introduced for the purpose of protecting the welfare of children, my opinion would be that all kinds of prepared milks, evaporated and condensed, should be embodied in the same bill.

As it is, however, a question of deficiency, I will explain later that this situation can be met in some different way. The assertion that filled milks are deficient in vitamine A has been first made on empirical grounds. However, latterly, Doctor McCollum, in the evidence here, has presented some experimental data in which he fed rats on Hebe and Carnation, respectively. He has shown you photographs which proved that Hebe was very much more deleterious to the health than Carnation.

I would never criticize the value of experiments of that kind for the determination of the dietetic value of various foods in general and of the requirements of a rat in particular, but one has to be a little cautious in judging from one species of animal to another.

In the last few months I had quite a considerable experience with xerophthalmia which I wanted to produce in rats in order to test certain results from milk and cod liver oil. I am using for this purpose a synthetical diet, very carefully purified, and I had great difficulty, sometimes, in making the rats develop ophthalmia, particularly after they had passed a certain age, and I inquired of a

number of investigators how they obtained quicker results, and a diet was recommended to me which was not only deficient in vitamine A, but also deficient in vitamine B, a diet recommended by Professor Sherman, and on this diet the xerophthalmia develops very much quicker, which shows that the combined deficiency is certainly a factor in the precipitation of the symptoms.

From the fact that no scurvy can be produced in rats you would judge that scurvy does not exist at all. On the other hand, rats show a great susceptibility to vitamine A deficiency, perhaps more than any other experimental animals. Other animals which were used in laboratories, like, for instance, pigeons, do not require vitamine A, at least in the adult stage. Besides that, we have found that different species of animals have a different requirement in vitamines. For instance, the antiscorbutic vitamine is required in much larger quantity in a guinea pig than in a monkey, but the gradations go further than that. I have recently found in using one species of animal, for instance, the pigeon, one can find certain pigeons which require four times as much vitamine B as other pigeons of the same size.

If one would calculate the food requirement of a human being from the food requirement of a rat, it would give an example of proteins that would make an absurd figure. The amount of proteins we give to a rat would amount to about 700 grams of proteins per day, whereas the human being can very well get along with 17. So it can not be applied without criticism to human beings. As a matter of fact, from the experiments of Hess one would judge that the requirement of an infant of vitamine A must be very much smaller than that of a rat, and this can be physiologically explained. A growing rat doubles its weight in the course of a few weeks, and perhaps his requirements are very much larger. We have no figures for the vitamine requirement in children, and probably will not have them for a number of years, because we can not make direct experiments on this subject.

Now, as regards Doctor McCollum's experiments, there are different ways of testing vitamine A. Some investigators use a synthetical diet; some others, like Doctor McCollum, use natural food supplemented. I call rolled oats natural food. It would seem that in his case a priori the

food is better than a synthetical food, but we know oats produce osstitis in certain animals, as I found myself in my experiments. He has used 22½ per cent of the diet of Hebe and Carnation, whereas the child would get the compound almost undiluted except by water. Under those conditions perhaps the vitamine A requirement would be better met than by dilution with other foods.

On the other hand, it occurred to me, as it always does in all the laboratory experiments, that in the case of testing of that kind the rats on Hebe had probably a very much smaller food intake than those on Carnation milk, and this reminded me of a group of experiments I made about two years ago. I kept rats on a synthetical diet composed of a large percentage of fat, and I included liberally of cod liver oil in it. In spite of that the rats lost weight enormously and developed rickets and xerophthalmia.

Now, you would determine from that experiment that cod-liver oil contains no antirachitic factor and no vitamine A. That would be wrong. It is simply that the amount of food taken was so small they did not get enough of this factor to prevent the disease.

On perusing the medical literature on infant food I found no data on the experience with Hebe in the American medical literature. One has to conclude, therefore, from the experience with skimmed milk, namely, that we can feed a child for a few weeks probably on this compound without any danger and perhaps longer. This does not mean that I recommend it for the feeding of infants, but it could be done without harm.

What I have said here indicates plainly there are two opinions on the skimmed-milk legislation—one opinion headed by Doctor McCollum and others, maintaining that such products should be barred from the market; other opinions maintained by Doctor Mendel, myself, and others imagine that this measure would not be justified on the face of the present scientific facts.

There is one important thing which has never been mentioned in connection with this bill, and that is this part, that the scientific proponents of the Voigt bill have told us that vitamines have been found to be very important for nutrition. They have told us that methods have been devised for determining the dietetic and vitamine volume

of certain foods, but they did not tell us that the same experiments have shown us the way to supplement the deficient foods.

For instance, if white bread is deficient in vitamine B it can be supplemented in this respect by using whole grain, using vegetables or fruits.

[fol. 536] If the canned foods are deficient in antiscorbutic vitamine they can be supplemented by orange juice and other fruit juices.

If skimmed milk is deficient in vitamine A it can be supplemented by cod-liver oil, egg yolk, and other products.

There are a number of other foods on the market which are notoriously more deficient than compounds are. I have here in mind white bread, margarine. I want to say that if Hebe or any other skimmed milk compound would be supplemented with green vegetables or these substances rich in vitamine A it would make a complete food.

Such things as green vegetables are recommended by children specialists. Particularly it was recommended on this line of nutritional work in France. There are many foods which need improvement, and in these foods we can count milk—strange as it may seem to you—butter, margarine, canned foods of all descriptions. They sometimes have not the food value that is ascribed to them. In spite of this fact, nobody bars these foods from the market.

The food industry is too young scientifically and suffers from imperfection, and many scientists are busy in this country to improve the existing foods.

There are other foods which are deficient, as I wanted to say before, like white bread, rice, macaroni, corn, etc., which are many times more deficient than compounds are. In spite of that, they are allowed to remain on the market, and these deficient foods, in spite of the fact that everybody knows they can not be used as a sole dietary—everybody in the United States, at least, knows—and that they give rise to various diseases in the Orient, like beriberi in the Philippine Islands and other places in the Orient, and give rise to a number of cases of pelagra in this country, yet there is no legislation as to them.

There is another danger in this proposed legislation. As I mentioned to you, a number of foods need improvement and the work on this improvement is going on in many laboratories in this country. For instance, more

thought has to be given to infant nutrition. I think Doctor Gerstenberger in his testimony, which I read, gave some few points on that. It is surprising, as I come from the other side, to see so much propaganda about more milk feeding in this country. All the propaganda in centralized parts of Europe which is done in this respect is propaganda for more breast feeding and not for more cow's milk feeding. It looks as if increased breast feeding would not be in favor with the American dairy industry. If a woman could be educated to know how important breast feeding is there would be more breast-fed babies and there would be much less of these problems which we are discussing today.

Now, all infants are allowed cow's milk, and one can easily imagine that amongst the children which physicians encounter there are children of different ages and different constitutions. We have children which grow naturally quickly. We have children which grow naturally slowly. Under the present conditions they get the same identical food supply with minor modifications.

Now, a semisynthetical product, like skimmed milk compounds, I think there is a great possibility of making progress in. These compounds can be enriched in proteins, in carbohydrates, in fats, in salts, and I have in mind particularly the lime salts and phosphorus salts which prove to be so important, and they can also be enriched in vitamines.

The difficult feeding cases which are encountered by the physicians are probably very often due to improper feeding formulas. Doctor McCollum spoke here on the prevalence of faulty bone development and bad teeth among the children of this country. One would infer from his words that a more liberal use of milk would remedy these conditions. However, Doctor McCollum and other investigators have found that milk is very deficient or perhaps entirely deficient in the vitamine which regulates the development of the bones. On the other hand, this substance is contained in very large amount in the cod liver oil and in the semisynthetic foods, like the compounds, and this vitamine could be incorporated and with some study the final product made better than cow's milk is for infant feeding.

The proposed legislation would hamper this scientific feeding idea which, on account of the great development

of the science of dietetics, is nearer a solution than it ever was for the last 10 years. But if we were to compound a food of this kind, I myself would be in favor of having this food scientifically perfect and that it should contain all the food elements which are necessary.

There is too great a tendency in the United States to utilize waste products for feeding children. For instance, like this product that was presented here made by the Borden Co., which is made out of cocoa shells, which can not be utilized otherwise. Very often nutrition experts are confronted with an inquiry from a merchant who has got a lot of peanuts or something like that on hand, if this food would not be good to make into infant food. Now, this sort of procedure, of course, has to be prevented by legislation.

The idea which I gave you just before, that the cow's milk is deficient in the antiscorbutic factor, shows that the cow's milk is not under all conditions a perfect food, particularly as has been emphasized to-day. The vitamine content of the milk depends very largely on the vitamine quantity of the food, and under present conditions the farmer is able to sell to the public a food which might be entirely deficient in vitamines, and there is no legislation to prevent this.

In my mind, there is no reason to stop using Hebe or other products of this kind for cooking and baking, especially as other articles of diet are very rich in vitamine A. In fact, in any book on vitamines—and there have been a number of them published—we can see a whole list of products which contain vitamine A. I mean this vitamine which prevents xerophthalmia.

Another question is whether in frying and cooking on account of exposure to air and heat, compounds like skimmed milk and butter would not finally lead to the same deficient product in the end, because butter does not contain so much and the exposure in frying and cooking would destroy as much probably as in this skimmed-milk compound.

There are on the market a number of infant foods which are infinitely more dangerous to the health of the infant than the skimmed-milk compounds are, and I think that the Voigt bill in its present form should not be adopted. I think that the Hebe Co. would have no objection to the

provision that use of the product should not be made for infant feeding.

I am absolutely certain that the Hebe Co. has no intention of harming children.

I would like to say a few words as an answer to Doctor Erf, who spoke here, on the danger of the introduction of skimmed-milk compound to the milk industry. I am not familiar with economics, but there is no doubt that by every competition the public will be benefited, and we should not eliminate competition. If they have competition they will give us better milk for the same price.

Mr. Jackman: Doctor, Senator Ladd—the Senator will permit me to borrow some of his questions—this morning asked some questions with reference to the effect of heat on vitamines. Will you tell the committee what is the effect of heat on various vitamines?

Doctor Funk: The effect of heat on vitamines is a very complicated problem. We know four or five vitamines which behave differently when they are subjected to heat and behave differently when subjected to heat and oxidation.

Mr. Jackman: Tell the committee in simple language about that.

Doctor Funk: Vitamine B, or the antiberiberi vitamine, is fairly stable at a boiling temperature. I have made experiments myself lately. It is very much more destroyed when the temperature comes up to 130° centigrade, and it is stable to oxidation more than any other vitamine.

The new antirachitic factor which has been determined in cod-liver oil is rather stable, while the antiophthalmia factor which is found in milk, in cream, in butter, and also in cod-liver oil seems to be more susceptible to oxidation than the antirachitic factor, and the antiscorbutic factor is the most susceptible of all of them, but it behaves differently in different foodstuffs. In some foodstuffs it is more resistant than in others. Tomatoes can be subjected to canning and still retain vitamine A, while in cabbage it has much less resistance. To what condition this instability is due we do not know.

Mr. Jackman: If milk is used in ordinary cooking open to the air what effect does it have on the vitamine in the milk?

Doctor Funk: Exact experiments in cooking have not been made. We can only judge from the laboratory experiments.

Mr. Jackman: Do you know how evaporated milk is made?

Doctor Funk: Yes.

Mr. Jackman: What effect does the heating and the condensation in the vacuum pan and the sterilization after it gets in the can have upon the vitamines in the evaporated milk?

Doctor Funk: Well, the vitamine A has not been very well investigated in this respect, and most experiments were made with vitamine C in milk. Here it has been found that pasteurization very sensibly diminished the vitamine C content, and recently it has been found in condensing [fol. 537] milk that the exposure to copper has a good deal to do with the destruction of this vitamine, and there is one company, I think, that has replaced all the copper machinery by machinery of some other metal or some other product.

Mr. Jackman: Senator Ladd also asked some questions this morning with reference to volatile fatty acids. Are those contained in butter fat, and also are they contained in coconut butter?

Doctor Funk: I suppose there are more contained in butter fat than in coconut fat, and perhaps only exclusively in the butter fat.

I have investigated from other point of view, not from this point of view, the different values of foods in nutrition, and I have found that the data are very scarce. We know even of experiments in which a number of animals have been kept on diets entirely free from fat, showing that fats are not so much necessary for nutrition. Before we knew about the existence of vitamine A and the antirachitic factor we did not know that if we have eliminated the fats we have eliminated the vitamine A at the same time, but at the present we are able to keep animals for quite a long while without fat of any description.

Mr. Jackman: What do the volatile acids have to do with nutrition?

Doctor Funk: On the present face of the data there is no reason to believe that they play any part in nutrition.

Mr. Jackman: There is another factor known as the amino acids in connection with the protein, is there not?

Doctor Funk: Yes.

Mr. Jackman: Is that important or not in connection with nutrition?

Doctor Funk: The animo acids are components of the protein, and are absolutely essential for every living being, for that matter.

Mr. Jackman: Are they in skimmed milk?

Doctor Funk: Yes.

Mr. Jackman: To the same extent as in the whole milk?

Doctor Funk: As far as we know they are to the same extent as in the whole milk.

Mr. Jackman: That is all I care to ask him.

Senator Ladd: You would not say the animo acids bore any relation to the volatile fatty acids, would you?

Doctor Funk: They have some genetic connection.

Senator Ladd: Would you say the animo acids and the fatty acids are of a similar character and serve the same purpose?

Doctor Funk: The animo acids can be obtained from the fatty acids and be very well formed.

Senator Ladd: In the human digestion?

Doctor Funk: Yes; can be formed in the human digestion.

Senator Ladd: I understand that the volatile fatty acids in the milk serve no special purpose with the child or with the young animal.

Doctor Funk: We were always of the impression that whatever is in milk is absolutely essential to life, but we know of substances—I remember of only one at the present time—which is present in milk and which is not essential to life, and that is glycocoll and glycogen.

Senator Ladd: Would you say that was necessarily analogous?

Doctor Funk: Yes; it shows that not everything in milk is absolutely essential to life.

Senator Ladd: I have great respect for your research ability, but I do not want to accept that without repeating the experiment.

Doctor Funk: I think this question of the fat should be further investigated. There might be some dietetic deficiency, but I could not find any evidence in the existing literature on the subject.

Senator Ladd: There is very little literature, is there not?

Doctor Funk: There is very little on that subject.

Senator Ladd: But all milks contain the volatile fatty acids in the fats, do they not?

Doctor Funk: Yes; but this might be a secondary product of contamination. Fatty acids are sometimes formed by the action of bacteria.

Senator Ladd: That is true, but would you say they are probably formed in the human body by the action of the bacteria there?

Doctor Funk: No.

Senator Ladd: Do the volatile fatty acids occur in the vegetable fats?

Doctor Funk: I really have not much information on that on animal nutrition.

Senator Ladd: Is it not generally understood that volatile fatty acids do not occur in any appreciable extent in the vegetable fats?

Doctor Funk: Yes.

Senator Ladd: If I understood you correctly, you said yeast contained a considerable quantity or quantities of the vitamine A?

Doctor Funk: No.

Senator Ladd: I inferred that from the statement you made.

Doctor Funk: No; vitamine B.

Senator Ladd: Vitamine B?

Doctor Funk: Yes.

Senator Ladd: I thought you had reference to vitamine A also?

Doctor Funk: No.

Senator Ladd: Does the skimmed milk contain considerable quantities of the vitamine after the fat has been removed? Of course, relatively, I mean

Doctor Funk: I have not the slightest idea how much.

Senator Ladd: I inferred from your statement also that the vitamines A were furnished in the green vegetables?

Doctor Funk: Yes.

Senator Ladd: And therefore that these might be substituted?

Doctor Funk: Yes.

Senator Ladd: Might be fed and thereby supplemented.

Doctor Funk: Yes.

Senator Ladd: How early would they begin feeding those to an infant?

Doctor Funk: They can be started as early as four or five months.

Senator Ladd: What particular ones would you use?

Doctor Funk: Tomato juice has been used already as early as four weeks by Dr. Hess on a number of children.

Senator Ladd: That contains vitamine A?

Doctor Funk: It contains A, B, and C.

Senator Ladd: I think that is all I have at present.

Mr. Bryan: Doctor, what is your present connection with Columbia University?

Doctor Funk: I am associate in physiological chemistry.

Mr. Bryan: Associate in physiological chemistry?

Doctor Funk: Yes.

Mr. Bryan: How much of your time do you give to your duties?

Doctor Funk: At Columbia University?

Mr. Bryan: Yes.

Doctor Funk: Several hours a day; two or three hours a day.

Mr. Bryan: Two hours each day?

Doctor Funk: Yes.

Mr. Bryan: Is that lecture work?

Doctor Funk: No; I have got experimental work going on there; also lectures in the year.

Mr. Bryan: I understand you have said—I was not here at the time and this is told me—that you did not agree with Doctor McCollum's experiments or the value of those experiments as regards the effect of Hebe and evaporated milk on rats.

Doctor Funk: No; I did not say that exactly.

Mr. Bryan: I did not hear what you said.

Doctor Funk: I said there are different experimental procedures and the different experimental procedures sometimes give different results, slightly varying results, and this particular diet which Doctor McCollum used might be different from some other diets.

Mr. Bryan: You mean Doctor McCollum's experiments have no value at all?

Doctor Funk: No; I do not think that.

Mr. Bryan: Have you made experiments yourself along that line?

Doctor Funk: With vitamine A I made experiments, but not with skimmed milk.

Mr. Bryan: Have you made experiments with Hebe?

Doctor Funk: No.

Mr. Bryan: Or similar milk compounds?

Doctor Funk: No.

Mr. Bryan: You testified, did you not, in the Wisconsin case?

Doctor Funk: Yes.

[fol. 538] Mr. Bryan: That is all.

Mr. Jackman: That is all, Doctor.

Dr. William E. Ramsey, of Perth Amboy, N. J.

Statement of Dr. William E. Ramsey, Perth Amboy, N. J.

Mr. Jackman: Will you tell the committee what experience you have had and what your connections are with reference to knowledge in connection with feeding and the way foreigners feed and their methods of reading labels and their habits of reading labels and things of that character? Go on and tell us in your own way, Doctor.

Doctor Ramsey: At the beginning of this investigation which I was interested in about a year ago when it first appeared before the Agricultural Committee in Congress, at that time the people connected with or interested in Hebe were met with the statement at their various hearings that the people—that foreign people or the people in industrial life were being misled as to the use of the Hebe preparation, and their representative applied to the labor department of the State of New Jersey asking for reference to some physician who was in touch with industrial life, and after this reference they asked me to take care of that end of it inasmuch as I am doing entirely industrial work.

My industrial connections are those of physician to the American Smelting & Refining Co., to the United Lead Works, to the Barbour Asphalt Paving Co., the Vacuum Oil Co. at that time, the Standard Underground Cable Co., the Russell & Houslacher Chemical Co., the Raritan Copper Works, and I am physician of the Pennsylvania Railroad and the Lehigh Valley Railroad. My work is almost exclusively in industrial life.

Before that I had been connected with public health matters. I had been president of the Perth Amboy Board of Health and during the cholera scare I was health officer to the port of Perth Amboy under the United States

Marine-Hospital Service, at which time I had an opportunity of seeing that class of work.

Now, the statement has been made at various times that the people in industrial life, particularly the foreigners, buy this milk and use it for infant feeding, believing that it is an infant food. My experience has taught me after 25 years with these foreigners that they are more careful in the purchasing of products of this kind than are really our American people. They are naturally suspicious, and that inability that have been criticized—their inability to read the language—causes them to be more suspicious.

It has been my personal experience, and as well we can show by industrial nurses and also by my associates, that these people will not take anything without inquiring as to what it is, and even at that they check it up. Most of them have children who can read, and after following it up, when my visiting nurse visits their homes, they will ask what this is used for when they buy a patent medicine. I have known them in the smelters at various plants to bring in a bottle of patent medicine and never even break the package until they bring it to a nurse in one of the departments who speaks the foreign language and can talk with them to ascertain what it is for, what it contains, and how it is used and why it is used. These people, I have found, do buy Hebe, and they buy Hebe in large quantities. I investigated that at one time in my local section, and the groceries were selling as high as 400 cases a month, sometimes as high as 700 cases a month, and inquiries at the groceries as to whether they knew what they were buying brought forth the statement that they knew what it was for and that they bought it and spoke of it as cooking milk and they described it in buying it as cooking milk.

In investigation at their homes I have never seen one of the milk compounds, particularly Hebe, which has the largest sale there—I have never seen it used for infant food. The only use I have ever seen Hebe put to in any one of these homes has been occasionally for coffee. They would have it on the table and use it.

We have a great deal of trouble in our section, for some reason, with the sale of fresh milk. At the present time we have a very serious controversy there by a bunch of

milk dealers who have consolidated for the purpose of eliminating or driving out the independent dealers. I have known them to go so far as to break into the cars and put dirt, acids, and even manure into the milk before it was delivered, and then have it condemned by our board of health. Such matters have created a suspicion; and not only that, but it has been detrimental, among the foreigners particularly, to the sale of fresh milk products.

The people in the foreign sections live a rather interesting life. That is, in a boarding house you will have four or five boarders. Each man buys his own foodstuff to a certain degree. That is, he buys his own meat or he buys his own fish. One man will only ask for a half a pound of meat for a meal; another will have a pound. His boarding mistress knows. She buys for him and she knows that this piece of meat belongs to Steve Yatzo and that piece of meat belongs to Joe Kitsch. It goes into the common stewpot, to which she adds tomatoes, the potatoes, or whatever goes to make up the stew, and she furnishes the bread. No people I know are so particular about their breadstuffs as are these foreigners, and without that bread is of a good quality the boarding mistress hears of it. She bakes a large loaf of bread. A great many of them use the Hebe or other milk preparations in the manufacture of the bread. That is their mode of living.

In other words, they have a better idea of the conservation of foodstuffs than the average American. When they kill a chicken they never lose a single part of it. They even cut its throat and save the blood. Every portion of the entrails and even to the feet and the scales on the feet are picked off for food, and that is all conserved. And so it is they know this is a milk compound, and you can not fool them; and when anyone comes and tells you those people are fooled into believing this is a condensed milk, they know better and they will tell you so. I have known it; I have seen it. I have talked to them. I have talked to the grocers; I have been in their homes; and all these facts I am quoting from absolute knowledge.

We have heard a lot of really interesting scientific talk, but I am speaking purely from the standpoint of a practical, everyday physician practicing in the families of these foreigners. They do not know anything about vitamine values. Neither do we. In fact, as I sat here and

listened to this talk to-day I was just thinking of the old, old story—nothing new under the sun.

Years ago on board of every ship that sailed out of Great Britain we know that they went out with their salt meat, their salt food, and no fresh vegetables. It was before the days of canning. And we know scurvy was a common condition among the sailors, so much so that the British Government passed laws. They found out from a practical standpoint, without knowing there was such a thing as vitamines, that something was lacking in their diet, and lime juice was put aboard every British ship, which custom exists to-day, and no British ship is allowed to leave port without a supply of lime juce. Why? To make up the deficiency in food.

So with the milk compounds. If there is a deficiency, in this intelligent day it can be made up; but let us not throw away the valuable compounds we have to-day.

Why, skimmed milk contains valuable products that should not be thrown away. We have not reached the stage in this country or in any other country where we can afford to give to the hogs or throw down the sewer one of the most valuable food products we have got. It is conservation of a food value we have got to make.

We talk about vitamines. Vitamines reminds me very much of an experience of mine. We are to-day dealing with ultrascientific men. The ultrascientific man is not a practical man, but they do excellent work.

Years ago I had the privilege of meeting Van Nordan, and I saw the work he was doing, and I thought what a useless waste of time—some of the experimental work he was doing on children, some trifling thing we would think little of now. In talking with Dr. Albert Lambert, of New York, one day he said, "Now, Ramsey, don't criticize those men too much." He said, "Those ultrascientific men do a pile of work, and out of what they do we cull something that is valuable."

And so it is with what we have heard here to-day. These men are doing wonderful work, and we can cull out of it something of value, but we must not accept everything they say at its face.

Any time I hear the history of vitamines or something about it I am minded to ask them what vitamine is. They say they can not describe it. It never has been isolated. We do not know whether it is a chemical product or what

it is, whether it is biological or what it is. We know it is something. Like when an old Scotchman was asked the definition of "psychology"; he said it was something that was talked about by a man who knew nothing about it [fol. 539] to people who did not know what he said. And that is just the condition to-day with the vitamines.

I am convinced that there must be something back of the great controversy on this as a pure-food product. There is some commercialism, something deep down in the bottom of it which goes farther than as a food product. They all admit that skimmed milk is a valuable food product in practical use. Every one of these foreigners who do their own cooking knows there is fat in there for shortening purposes, and that makes it a possible cooking material.

Everybody admits, as far as I have been able to find out, that coconut fat is not an injurious or deleterious article of food. Every man admits that skimmed milk is not injurious. We all know this is used for cooking purposes and is producing a result. As long as it is producing the result, why in the world disturb it?

Mr. Jackman: Did you ever see a case of xerophthalmia in any of the children you have seen in any of these industrial communities?

Doctor Ramsey: I do not know that I would know it if I saw it. I have only heard of it in the literature. I have never seen it among these children that I have described, and I have seen hundreds of them.

Mr. Bryan: Doctor, are you a practicing physician, or do you confine your work to the company work you have described?

Doctor Ramsey: A practicing physician.

Mr. Bryan: And do the company work in addition?

Doctor Ramsey: It is in doing the company work I am a practicing physician.

Mr. Bryan: You are not in independent practice, then?

Doctor Ramsey: Oh, no.

Mr. Bryan: Have you specifically discussed with any of these foreigners in whose homes you have been what they were feeding their children?

Doctor Ramsey: Yes.

Mr. Bryan: In all cases?

Doctor Ramsey: I can not say in all cases. I do it regularly in my everyday routine work.

Mr. Bryan: Are you present when the babies are fed?

Doctor Ramsey: I have seen hundreds of them fed.

Mr. Bryan: Do you make it a practice to see or does it just happen that you have seen it?

Doctor Ramsey: You know, I don't make a practice of it.

Senator McKinney: Is that necessary?

Mr. Bryan: I am merely testing his knowledge. I mean to cast no aspersion or anything of that sort.

You said you were not aware of any Hebe being sold by grocers in Perth Amboy for anything except a compound. You were not present at the early hearings of this committee, were you?

Doctor Ramsey: Of this hearing here?

Mr. Bryan: Yes.

Doctor Ramsey: No. I have been here since this morning.

Mr. Bryan: You are not aware of the fact then that affidavits were laid before the committee in which a number of specific instances were described in which Hebe had been sold in response to requests for condensed milk?

Doctor Ramsey: I have been present at previous hearings on this same matter in which affidavits were produced that were absolutely proven false later.

Mr. Bryan: That is not necessarily my question, Doctor, you know, of course.

Doctor Ramsey: If I was not present I could not hear the affidavits.

Mr. Bryan: Therefore you are not aware of the fact that there are affidavits on record with the committee that this compound has been sold in Perth Amboy as evaporated milk?

Doctor Ramsey: I am not aware of that.

Mr. Jackman: Where are those affidavits?

Mr. Bryan: You were not present.

Mr. Urion: We had no hearing.

Mr. Bryan: Your associate was here?

Mr. Urion: My clerk.

Mr. Bryan: Well, your clerk.

Mr. Urion: To find out what was being done.

Mr. Jackman: Those affidavits do not appear in the record.

Mr. Bryan: They are on record.

You testified in the case in Wisconsin, did you not, Doctor?

Mr. Ramsey: Yes.

Mr. Bryan: That is all.

Mr. Jackman: Let us have those affidavits.

Mr. Urion: We may want to question the witness on those affidavits.

Senator McKinley: I do not know anything about them.

Mr. Jackman: Are they available? Does anybody know anything about them? They are not in the record. Where are they available?

Mr. Bryan: They were filed in the record on that day. I do not know what became of them.

Mr. Balderston: I can speak with reference to the affidavits.

Mr. Jackman: May we see the affidavits?

Mr. Balderston: They were given to the stenographer, or copies of them.

Mr. Jackman: Did Mr. Holman take them with the other papers he took from the stenographer?

Mr. Balderston: I have nothing to do with what Mr. Holman might have done. They were given to the stenographer to be copied by the stenographer in the record.

Mr. Jackman: Has Mr. Holman got them?

Mr. Bryan: Mr. Holman returned to the stenographer every document furnished him for revision.

Mr. Balderston: I would be glad to furnish the affidavits. I have not checked the copy of my testimony that was given me with respect to seeing whether every affidavit which I submitted had been copied, but I can and will be glad to submit those in evidence if they are not in the evidence which the stenographer took.

Senator McKinley: I might say, as chairman of the committee, I have never seen a copy of this record.

Mr. Urion: Mr. Chairman, we have the doctor here from Perth Amboy and two visiting nurses who put in their time there, and we would like to see these affidavits and see them now while we have these witnesses here, and we think we are entitled to them. So many of these things that go into the record we have not seen. We have seen a transcript of the testimony but the records we have not seen, and we know that the records have been taken out and taken around the country and do not know that they have been returned. We would like to see them.

Senator McKinley: I do not know anything about any affidavits.

Mr. Balderston: Do you want me to testify about this?

Mr. Urion: No; we want the affidavits. It has been stated the affidavits are a part of the record of the committee. So far as they know they have not seen them.

Mr. Balderston: I can not very well submit the record, Mr. Chairman, without having the privilege of testifying.

Mr. Urion: If these affidavits have been introduced before the committee and are in the record they are not in the possession of this official of the Milk Producers' Association.

Mr. Balderston: I have the affidavit here.

Senator McKinley: How do you happen to have them if they have been presented to the committee?

Mr. Balderston: Mr. Chairman, I presented to you and showed you the affidavit itself and at the time gave to the stenographer an exact copy of it, having read from the affidavit here before you.

Senator McKinley: Has the stenographer given you people a copy of the record and not given it to the committee?

Mr. Balderston: Given it to whom?

Senator McKinley: Mr. Urion, or you, or any of you?

Mr. Holman: Mr. Chairman, I happen to know that the records have gotten into proof shape and perhaps the clerk of the committee has them.

Senator Ladd: Have the records been approved by the committee?

Senator McKinley: I have not seen any.

Mr. Urion: We are told by counsel for the Borden Co. that these affidavits have been introduced and are a part of the record and we now hear from this gentleman, an official of the Milk Producers' Association, that he has them and can not produce them unless he is examined. What is the fact?

Senator Kendrick: As one member of the committee I will say they might have been offered for the record and I might have forgotten about it. I do not recall the circumstances, but there is no sense in the world of your quarreling about it. The records are here to show. The [fol. 540] stenographer perhaps has them and if they are not here it ought to be easily proven that they have not been introduced.

Mr. Balderston: Mr. Chairman, I am not wishing to quarrel with anybody. Mr. Urion is insinuating we are trying to suppress something.

Mr. Holman: He has been insinuating it at every step of the performance.

Mr. Urion: I object to that statement. The statement was made by counsel that these affidavits were produced and were in the record and he was surprised that we had not seen them.

Mr. Bryan: Mr. Balderston states he produced the originals and then he produced a copy for the record. If that is not a quibble I never saw one.

Mr. Urion: We ask to have the affidavits.

Mr. Miller: I might just submit a word that will perhaps clarify this situation. As I understand Mr. Balderston, we have the original affidavit. I would suggest that original be submitted to these gentlemen now for their inspection, with the understanding it can be returned to Mr. Balderston to make a copy to hand to the stenographer, if that has not been done, because it is quite important that the original affidavits remain in Mr. Balderston's possession.

Senator Kendrick: Do you recall what time they were submitted?

Mr. Balderston: I submitted in the course of my testimony a number of affidavits, moving as rapidly as I could, and handing them all over in a sheaf.

Senator Kendrick: What day was that?

Mr. Balderston: Whenever I testified. The first day, I think.

Senator McKinley: We met about the 1st of July and then the 7th.

Mr. Balderston: About the 30th of June was the first.

Senator Kendrick: Was it at that hearing?

Mr. Balderston: At that hearing I read from these affidavits, and it was my purpose to and I did pass over across the table to the stenographer copies of the affidavits from which I had been reading. I am perfectly willing to submit the original to the committee, but I do wish to have for my own protection a copy to keep for myself, and I will be glad to pass this around. This is the original. This is the sworn affidavit.

Mr. Urion: Mr. Chairman, I asked in the first instance for the affidavits. If they had been presented at that time all of this conversation could have been cut out.

Mr. Balderston: The original was sent to me for revision, but the affidavits and other things which I introduced in evidence did not come back.

Senator McKinley: You say you have them.

Mr. Balderston: The copies did not come back to me, so I do not know what they have done with them.

Mr. Jackman: Mrs. Rose Boughton.

Statement of Mrs. Rose Boughton, of Perth Amboy, N. J.

Mrs. Boughton: I am the visiting nurse now for the Warner Chemical Co. and for four and one-half years was visiting nurse for the American Smelting & Refining Co., of which Doctor Ramsey is physician in charge. Previous to that time I was public-health nurse, and for seven years I have done visiting in the families I speak of and am on pretty friendly terms with all my people. Perth Amboy is not a very large town, and as one who has been working among that class of people for seven years, I know them all pretty well.

I was asked, I should say, about two years ago, by Doctor Ramsey—and at that time I was still with the American Smelting & Refining Co.—to look into the use of Hebe. He asked me if I ever saw it used and to watch out for it and see what I found.

With very few exceptions the children of these foreigners are breast fed—very few exceptions, and the few exceptions are fed on Eagle brand condensed milk, and the people that are careless about feeding their babies will be careless in every way. I have seen mothers take a can of condensed milk and punch a hole in it and pour a little into the bottle and put it under the tap and shake it up and give it to the baby. But it is not because they can not read labels. They understand perfectly well what they are doing. You get a mother that is careless like that and she does not care; that is all. It is not because she does not know any better.

I have had men out in the plant bring me bottles, because I can talk to them, and they have a lot of confidence in me, I think, because I have been called on to straighten out their affairs in the home and in the plant, and they have

brought me bottles of patent medicines to get me to explain their uses before they took them and have asked me if it would be a proper thing to take. And they certainly would do that with anything they are in doubt about.

They are a very superstitious people, as Doctor Ramsey has stated. I do not know whether it is because of what has happened on the other side, but when they come over here they have an idea that somebody is going to impose on them in some way.

Senator McKinley: Do you visit the homes as a nurse?

Mrs. Boughton: I visit the homes as a nurse and I come in the plant in the morning and I do first the daywork. In the plant we have a clinic every morning at 10 o'clock. The doctor comes and we have a clinic, but in the afternoon I go out and visit the homes. I look up men that are reported to be sick, and the babies of the men that are sick are reported to me, and I will go and look them up, and cases of infant feeding, of course, come in my line a lot. And, as I said before, those people have not any patience with any artificial food whatever. They have an idea, some of them, that if they can not feed their babies mother's milk the baby might better be dead anyway. But it is not because they do not know any better, and I have never seen any filled milk or milk compound used for feeding babies, and I have seen a great many and I have been in a great many of these homes.

I have also, since I have been asked to investigate this, made numerous visits to the groceries in the neighborhoods in which these people live and I have asked them—I have pointed this out and have asked for it, and they told me that was not milk, it was a cooking compound, and that the people knew it was a cooking compound.

It is quite interesting, as Doctor Ramsey has described the way these people live. They make this bread and they use this cooking compound in making the bread and in making cream soups. They are mostly all Catholic people and on Friday can not have meat and they must have this soup. Soup and bread are practically what they live on—and coffee, and they make these cream soups with this cooking compound, but they know it is a cooking compound. They are not deceived and I have never seen a child fed on it.

Mr. Jackman: That is all.

Senator McKinley: Any questions, Mr. Bryan?

Mr. Bryan: Have you seen any children fed on the soup made out of the Hebe compound?

Mrs. Boughton: No.

Mr. Bryan: Who eats the soup?

Mrs. Boughton: The families, the boarders, the adults.

Mr. Bryan: Do not the children eat it too?

Mrs. Boughton: Not infants.

Mr. Bryan: No; children?

Mrs. Boughton: Yes, sir; children.

Mr. Bryan: The whole family eat the soup?

Mrs. Boughton: Yes; and you will find very little malnutrition among that class of people.

Mr. Bryan: Did you testify in the Wisconsin case?

Mrs. Boughton: No, sir.

Mr. Bryan: Have you testified in any other cases of this character?

Mrs. Boughton: No, sir.

Mr. Bryan: Or investigations?

Mrs. Boughton: No, sir.

Mr. Bryan: That is all.

Mr. Jackman: This is the first time you have ever appeared anywhere, is it not?

Mrs. Boughton: This is the first time I have ever appeared anywhere.

Mr. Jackman: That is all.

Mrs. Edna Tanggaard, of Perth Amboy, N. J., and also connected as a visiting nurse in that city.

Statement of Mrs. Edna Tanggaard, of Perth Amboy, N. J.

Mr. Jackman: Will you go on, Mrs. Tanggaard, and tell this committee what your experience has been with reference to what you know of your own knowledge with respect to compounds and the way the people work, and what you do, and what your position is?

[fol. 541] Mrs. Tanggaard: I have been visiting nurse, going around through these families in Doctor Ramsey's office for two years, going out where Doctor Ramsey has detailed me to go. I have seen different kinds of milk used in the homes; I have seen people have Hebe milk or Hebe compound and have asked them if they knew what it was, and what they used it for, and they said they used it in cooking and baking.

I said, "What about the children? Do you give it to the children?" "Oh, no; because it says on the can it is not for children; it is just for cooking and baking purposes; no."

You will find among the foreigners 9 out of every 10 babies are breast-fed babies, and if they are not, it is usually Eagle brand condensed milk. When a child gets to be 3 or 4 months old they start feeding it everything, regardless of what it is. It seems as though they do not care. If the baby is not breast fed they do not care whether the child lives or not. They just have the idea if they can not give it mother's milk the child will not thrive at all.

I have visited a couple of different stores in Perth Amboy and I asked the grocery man if he had the Hebe compound, and he said yes; and I said, "Do you sell much of it?" and he said he did, and he has never had any complaints about it.

Then I inquired whether the people realized what they were buying when they bought the Hebe compound, and he said yes, because he could not fool them in any way, because they were very enthusiastic and inquired about it, and if they could not read the labels they would ask one of us nurses or ask the grocery man, and if the grocery man could not explain to them right and they could not talk to us they would have one of their children interpret for them, and ask us how to use it and what to do with it before they would attempt to use it in any way. You can not put anything over on the foreigners down there. It is impossible; you can not do it.

And as for using it for infants, I have never in any instance seen it used for infants at all.

Mr. Jackman: Do they take ice and use fresh milk, these foreigners?

Mrs. Tanggaard: The foreigners, as a rule, do not take to fresh milk for the simple reason they think there is something wrong with it, because there has been so much controversy about milk in Perth Amboy. They prefer to use the compound for cooking and use, as I said, the condensed milk for babies, if they are not breast fed, but they do not keep ice in order to have fresh milk.

Mr. Urion: Do you know of a visiting nurse or any woman in Perth Amboy named Amelia P. Stoesser?

Mrs. Tanggaard: As a visiting nurse?

Mr. Urion: Yes; as a visiting nurse or one who goes around among the families?

Mrs. Tanggaard: No, sir; I do not.

Mr. Urion: Is it a large town?

Mrs. Tanggaard: A very large town. We have a very large hospital. I know the nurses at the hospital.

Mr. Urion: That is all.

Senator McKinley: Any questions, Mr. Bryan?

Mr. Bryan: Mrs. Tanggaard, in your visits in the homes, as you have described, have you ever seen any of the Hebe cook books or receipt books?

Mrs. Tanggaard: No, sir; they do not go by cook books or anything of that kind.

Mr. Bryan: They use Hebe for cooking purposes?

Mrs. Tanggaard: Yes, sir.

Mr. Bryan: And after the child is weaned from the breast it eats, you say, whatever the family eats?

Mrs. Tanggaard: Yes.

Mr. Bryan: And 90 per cent of the children are breast-fed?

Mrs. Tanggaard: Yes.

Mr. Bryan: So only 10 per cent would eat any artificial food or anything but mother's milk?

Mrs. Tanggaard: Yes.

Mr. Jackman: This soup you speak about is made out of stock that they collect and then has vegetables and everything in it?

Mrs. Tanggaard: Yes.

Mr. Bryan: They use Hebe for other things than soup, do they not?

Mrs. Tanggaard: They use it for almost everything.

Mr. Bryan: How old are the children when they are weaned from the breast?

Mrs. Tanggaard: It depends on the time of the year. Some foreigners will not wean them in the summer time. I have seen children over two years old that were breast fed.

Mr. Bryan: And from two years——

Mrs. Tanggaard (interposing): They try not to wean them in the summer time irrespective of age, but give them food between the nursings.

Mr. Jackman: Do you find any malnutrition there at all?

Mrs. Tanggaard: Very, very seldom.

Mr. Jackman: That is all.

Dr. Eva L. Wilson, of Manhattan, Ill. Doctor Wilson is chairman of the State Federation of Women's Clubs.

Statement of Dr. Eva L. Wilson, of Manhattan, Ill.

Doctor Wilson: Do you want me to go over the problem from the standpoint of the farmer? Is that what you wanted to hear?

Senator McKinley: You probably had better tell your story in your own way.

Doctor Wilson: I have just been thinking it is about the first chance I know of that the rural small farmer has had to come before your people and to really have something to do with the making of our lives, and for that reason I am very fortunate in having an opportunity to talk a little. I do not know as I will talk to the point right away, but the point I have in my mind is the testimony I have heard today and especially in regard to this problem of feeding children.

For the last three years I have been talking all over Daviess County and Pope County, on public health and especially in regard to the work we have done for the children. It seems to me, though, this problem is a national problem and ought to be looked at from that standpoint.

I have found this in Illinois, that we do not have enough milk to feed our children properly. There is a line drawn around Chicago which goes as far west as the next to the last county, it goes north a long way, it comes south just about 10 miles north of my farm, in which section they have a large production of milk. All of the rest of the counties that I have been in, and I have been in three-fourths of the counties of the State

Senator McKinley: What State?

Doctor Wilson: Illinois. In all the rest of the counties they actually do not have enough milk for their children to drink whole milk.

In Stark County, which, as you know, is a strictly rural county, they having no town in the county with over 600 or 1,000 people, there were 80 per cent of the children undernourished last year, as discovered by the public health nurses.

In Pope County I was in a town 15 miles from the railroad where they told me they did not have sufficient milk to feed their children, because they did not milk their cows. I turned around to the farmers and said, "Why can't these people have milk for the children?" "Well, they don't like to milk."

We do not have sufficient milk among our country people to feed the children the way they ought to be fed.

We have the McCormick Memorial Fund to help us in Illinois, and last winter the McCormick Fund sent down a nutrition worker into my part of the State to do work in the county where most needed and to teach the children how they ought to eat. An investigation was made over the county by the county nurses, and then this nutrition worker came in and established nutrition classes. Not in the industrial districts, which you know we have in Joliet, but out in the rural communities, because we found in Plainfield Township, the richest township we have, a township where every family lives on its own farm, practically every farmer farming his own land, this nutrition worker found the largest number of undernourished children in the county, and I thought it worth while to look into the reasons why this might be, and I found a number of things. I know the rural child is worse off than the city child on this question. I know also that our problem is not of the rich farmer or the poor farmer. It is a problem of getting the child to have and to take the proper nourishment. It is not a question of money at all. We have our serious conditions among our best children. It is not a question of poverty at all. Now, what is it? My findings are these, that this undernourished condition of children [fol. 542] has come from—first, heredity, and second, I would say, food habits and bad habits generally; third and fourth, ordinary physical defects.

Of course, you can not help heredity, but it does not help Johnny any to say that Johnny is small because his grandfather was small, and it does not help Johnny any to say that Johnny can not eat tomatoes because his grandmother could not eat tomatoes. That does not help Johnny any.

But I did find a good deal in food habits, because, being normal myself, when it came time to eat on the farm I ate wherever I was and I unconsciously absorbed the food habits of my people.

I found this among the country people, that they might have a balanced meal, but Johnny might eat all the meat and Mary eat all the cake, and the family might be balanced as a family, but Johnny and Mary were not balanced as individuals. In other words, the children eat what they want to eat.

As Doctor Emerson says, the American child fights, bleeds, and darn near dies to get his own way. And so he wants to eat what he wants to eat when he wants to eat it. If you have ever followed a country child to school you know what I mean. The child on the farm or anywhere else is running this whole affair for us all. He gets up when he gets ready and does not have time to eat his breakfast, and if she is a 13-year old girl and cares more for puffs over her ears than for breakfast she goes without breakfast. If he does like breakfast, he will take a cup of coffee or anything he likes, because the rest of the family is through breakfast. On our farms the breakfast is over hours before school time. We are keeping the 8-hour day, you know; eight hours in the morning and eight hours in the afternoon, endeavoring to make enough to live on.

If you have ever noticed Johnny's dinner pail, his mother packs the dinner pail as the dinner ought to be eaten, and puts in first three or four sandwiches, and then cookies, pie, and so on, and the child has had no breakfast and at recess is hungry, so he opens up the pail and takes the doughnut and pie and eats it; then at noon-time he is not hungry and plays ball. Then after school he is quite hungry and on the way home from school eats the sandwiches, and he gets home and does not care about his supper because he had the sandwiches, and he goes to bed a hungry child who has eaten nothing but lunches all day.

That is one of the reasons for the malnutrition, coupled with the fact that our parental control is of so little value that we have not fed our children the way they ought to be fed. Now, what remedy do we have for it? I would like to say that every child can and should eat everything. Every child can be taught to eat everything—every healthy child. I am very glad I am talking to a committee of gentlemen and ~~mothers~~, because mothers would say: "I did not like so and so, so they can not eat it." I insist every child can be taught to eat every article of food, and every child can be taught to drink milk, with so few exceptions that it is

not necessary to bring the exceptions up here, because they are of minor importance.

When we come to remember the lesson which we have learned in the last few years that it is worth while to give children a varied diet very early, we have found that one of the difficulties we encounter is the eternal self-prescribing of the average rural family. It is harder to get a doctor in the country than it is in the city, so they prescribe for themselves, and when baby is not doing well and needs something to help it out in the feeding they are very likely to prescribe themselves, and nine times out of ten they prescribe what has been the bane of the physician's existence, the condensed-milk problem. There is apparently no excuse for that out on the farm, because they ought to have plenty of fresh milk. Whether they have or not, they ought to have it. But they take the condensed milk because it is handy, because they can read what it says on the can, because they do not have to go to the doctor and pay $2 for advice. So they do not run to the doctor, only going to the doctor after a month or six weeks or two months because the baby has gotten so desperately sick with some of the current diseases. We know that condition exists, and we have recognized that condition for a great many years, and it is not necessary to go into it very deeply, but we find almost without exception that condition exists where children are fed on condensed milk, and we are watching that through our State and asking that the children be fed milk fresh from the cow; and if I have the time, I might tell you how you might help us on that point rather than on some of these points that seem to me rather irrelevant. Pardon me.

You all know that the American farmer is digging his grave with his teeth and going faster than the American business man because he eats so heavily and so rapidly; and since we have had so much to do on the farm to make enough to pay our last year's debts, we have not taken time to eat. Sometimes they just eat lunches, and we have quite an experience in the last year in Illinois in trying to cooperate, and our cooperative grain association is about to wind up in what seems at the present time to be merely a fiasco. And I do not believe the American farmer has a right to object so much to cooperative business, whether it succeeds at present with them or not, until they learn to use what they have on the farm without having to pay so many middlemen's profits.

What I want to say is this: On the shelves of every farm home you will find all sorts of fancy packages and fancy containers containing puffed wind and all the rest of this stuff that is sold to us. I think it is labeled puffed wind and baled hay and all those things, but I can not remember the right names, but you know what I mean, and they pay as much or more for the container than they get for what is inside of it.

A couple of years ago they told us that if we farmers were getting our value for the corn that we ought to get according to what we paid for our breakfast food we would be getting $48 a bushel for our corn. I don't know what others got, but we didn't get it. But that is what they said we ought to have if we got the value for the corn represented by the cost of the breakfast food.

My contention has been among my farmers for a long time that they have their complete food in their corn. They have their complete food in their wheat, but they do not eat it, and instead send it to the middleman and have him take out of it all that is worth while and send it back to us in a sack of white flour, having saved all that is worth while in that wheat to sell to us again over their counters to feed our hogs with.

I husked the corn myself for seed, and I decided then and there that I would a good deal rather get my own corn ground than to have my corn served up to me with such a variety of meat as I was getting, because I never saw such a variety of worms as there were last year in the grain.

Senator McKinley: There are vitamines in those worms, are there not?

Doctor Wilson: There might be a certain amount in the worms, but you know in this world we have to take into account appetite. A thing that is served in an appetizing manner is going to do us more good, physicians and nutrition workers to the contrary, than something that is not appetizing. We are going to eat what looks good, and it looks to me that if these dealers can hand over to us along with devitalized wheat and devitalized corn hand back to us in a properly labeled container a food article not only with its full food value but also with value added in the way of fat, they are doing a pretty good thing in the way of giving us something worth while. The middleman

may have some excuse for living if he can do that for us farmers.

The question has come to my mind to-day, and, while I realize I am here to try to tell something, the question is still in my mind, and I hope to stay long enough to get it answered. What do you want us to do with the skimmed milk? Up to two years ago, when we took the cream from my milk, it ran through my farm ditches. To-day they are raising some pretty good Duroc hogs on our place, but I do not know whether we will get the full value of that milk. We may if the hogs are in a charitable frame of mind.

In regard to the American farmer and food value I wish you would extend interviews far enough to tell us what we can do in regard to this tuberculosis problem which makes the whole milk of our farms so nearly unfit for the children. There is a question in our minds what we ought to do when there are one or two cows, and we have an ideal condition present apparently, but they are found to be so rotten with tuberculosis we are unable to use the milk or even the lean meat in these animals. That is not in the large dairy herds but on the small farms down in the State, whose milk does not go into the city where it is tested, but is milk that is going into the villages and has officially no supervision except such as we are trying to get through our State board of health. It is the milk the farmer sends in without being previously prepared in any way, and he is selling it for us to use for our children. It may be irrelevant to the discussion, but it is one of the points that has come up in my mind as I sat here listening to this interesting scientific discussion.

I only came here as interested in the farmers within a radius of 20 miles, but we have valuable people within those 20 miles of whom we would like to take the best care possible.

Senator McKinley: Thank you.

Mr. Holman: Mr. Chairman, at this time we would like to ask the gentlemen on the other side as to about how much time they expect to use in closing the hearings. In the [fol. 5437] former hearings we used a day and a half, and they have run about the same length of time. We are willing to agree as to a limitation of time.

Mr. Jackman: In connection with that we supposed when we came here that Doctor McCollum was going on for the

purpose of cross-examination. Practically the entire case which the proponents have made here is based, as I gather it, on the testimony of Doctor McCollum. How long the cross-examination will take will depend largely on how fast the doctor answers the questions asked and how much explanation he makes. We have, I think, four or five or possibly six more witnesses whom we desire to have heard, some of whom will be very short.

Senator McKinley: We can hear one more to-night.

Mr. Jackman: Mrs. Marion H. Beal, of Chicago, Ill. Mrs. Beal has written a number of books and articles, among them The Better Child.

Statement of Mrs. M. H. Beal, of Chicago, Ill.

Mrs. Beal: Mr. Chairman, I believe you understood my name, Mrs. Marion Beal, of Chicago. I have been in welfare work and settlement work in the city of Chicago for over 20 years, a voluntary worker. I never received one cent in my life for my welfare work, not even my car-fare.

I am on the board of one of the poorer settlements in Chicago, but I am familiar with the work of most of them. The settlements, as you know, are located in the poorer districts of Chicago and are there for the purpose of helping people to help themselves. We have all types there; that is, the foreign born. In one settlement, in the Little Wanderers' Nursery and Settlement, we have 27 nationalities. So I presume that would come under what you call the foreign-born and the ignorant people.

The people that come to our settlement are not the laboring class exactly. They are the laboring class, but they are the poorer people of the laboring class, the ignorant class. Our problem with these people is to teach them to be Americans and to bring up their families properly. That, of course, is our first great problem, because we realize that as the coming citizens of America we want them to be healthy and normal and to help them to be the moral and physical support of our country. We realize that the boy and girl of today are the fathers and mothers of to-morrow.

We had several gentlemen speak to us before a meeting called for this purpose at the City Club last week one day, and one of the gentlemen tried to impress upon us that it was our duty to assume the responsibility of bringing about

a healthy condition and giving them the best possible advantages, and all that kind of thing.

Why, gentlemen of this committee, I will guarantee that I have forgotten more than that gentleman ever knew about bringing up babies. I have not only helped with thousands and thousands of babies in our own country, but I was with the Near East for two years trying to help out the awful, terrible problem that they have for the poor, suffering babies of Armenia, so I know something about babies, but very little about vitamines.

Our problem with the infant is not with the small infant, because 95 per cent of the foreign-born babies feed from the breast. We have no trouble coaxing them to feed the babies from the breast like we do the society mother and occasionally the club woman, because they nurse their babies just as long as they possibly can. Poor, ignorant things, they have a reason for that that I can hardly explain here; but, nevertheless, I sympathize with them, and our great problem is to have them wean the babies at the proper time, because they go to work at night to scrub or in the morning down to the packing houses or wherever they happen to work. They nurse their babies and bring them to us, and when they first come they bring a bottle of tea or a bottle of coffee and ask us to feed it to the baby. We have to teach them that that is not a proper thing to give the babies, and we see that the babies have the purest, best of milk that can be obtained.

My task is to hustle around and get some money when it gets low to furnish that milk for these babies.

We have not any trouble with compounds at all. I want to say that the foreign-born mother—I have never found any mother that fed her baby compound for the simple reason that, as one of the visiting nurses stated, the foreign-born mother is the most suspicious person in the world. Why, she would run a mile from that can when she saw that "For cooking and baking. Do not use in place of milk for infants," because she thinks that a poison right away. That is why Borden's milk is so popular with these mothers, because it says it is for babies, and how to use it and so on, and especially prepared for babies, and they receive letters telling them how to use it, etc., and it is so splendid.

So our trouble is not with the compounds. In fact, the people I have to deal with—and I do not believe there is anyone in the world who comes in such close contact with or understands these people so well or who has their confidence quite so much as the settlement worker, because they come to us with all their problems, trust their babies to us, come to us to get their husbands out of jail and to put them in jail occasionally. There is only one other person who comes in such close contact with these people, and that is the visiting nurses; God bless them. I could hardly keep from putting my arms around those blessed girls, because no one knows what a task it is to go into the homes of these foreigners and teach how to be clean. I could tell you this to make that plain. When I have been listening to this talk back and forth about vitamins I just wished you could spend the time with me in our settlements and know something about babies, about the real care of them. You would forget something about those vitamines. Of course that is all right; that is very vital.

I was brought up by a Scotch mother. She had 9 children; one of her sisters had 12; another 14. I am past middle age, and yet I might still say I still have my teeth, more hair than I know what to do with, and a little more health than I care about, and I guarantee my mother did not know a vitamine from a last year's bird's nest.

And I want you to understand I have the greatest respect for the cow, for the dairyman, and for their pure fresh milk. We have been very grateful for this; but we have had to fight for it.

I want to tell you why I came into the settlement work. It was because my own boy was taken down by bad milk. I am not speaking of the big dairyman, but I have in mind a case where one of those who bring the milk to your door let a mother have milk for six months free because she *could* could not afford to pay.

We get down to practical things in settlement work. I have found we have had to fight every step of the way to get pure milk. Of course the bigger dairies have been more sanitary, etc., but I was very much impressed when Mr. Holman, I believe the name is, spoke yesterday of being in the Orient and seeing those coolies walk over the cocoanuts. I assume the coconuts were covered up by their shells and not broken up when they walked over them with their

feet covered with syphilitic sores. That would frighten a mother to death, and if not as hard boiled as we become in settlement work she would come here and beg these good men to take these things off the market. We learn a thing or two in our work. We do not have to go out of our own country to find these things. Naturally they are more prevalent in the cities than in the country, but human nature is pretty much alike all the world over, and we have known of cases where milk was handled by syphilitic men, and we have reported it, and I want to say I think the dairies in every instance did the very best they could about it. But we ought to fight for all those things.

I think I strayed from my subject a little. I want to tell you the reason I came into this work. Everything in life is relative. The Hebe Co. are here to protect their interests, the dairymen are here to protect their interests, the Borden Co. is here to protect its interests. I want for the settlements to protect our babies.

I want to tell why I went in settlement work. I have adopted my sister's child. Be ause she was unable by reason of ill health to feed the child we took milk from one of the best known dairies in the United States, and the baby was poisoned from that milk. If Doctor Christian was alive he would guarantee this. It was traced to this dairy. Now, I do not go around and tell this. I do not know that I ever told it publicly before, but it only goes to prove what can happen. That child is still a partial invalid and has never been able to go to the public schools. I keep him out in the northern part of Wisconsin to inhale the healing pines there, hoping some day he may be all right. I did not know so much about baby life. I was a housewife and had never been out of my home at that time. That is when I went in the settlements trying to keep other mothers from going through what we have gone through. But we have had to fight for pure, clean milk, and we certainly appreciate it.

The trouble we have after the child is taken from the breast is to teach the mother not to feed it on condensed [fol. 544] milk. We have a great deal of trouble, with all due regard for Borden's milk. I do not care anything about that. I am not here for either the Hebe Co. or the Borden Co., as far as that is concerned. The fortunes of either one mean nothing to me. But we have had a

great deal of trouble with the feeding of the Eagle brand milk for the simple reason that the mother—one of the things that impressed me was that one of the gentlemen said she would not read the labels, and yet they have a much more complicated label to read on the Eagle brand, and the consequence is that they are not always careful about it. They overfeed the child, or they let the milk stand about, and very few of these people take ice, and if the child does not eat it all at one time they give it to it at another. So we have a great deal of intestinal trouble to deal with, and when the time comes that the child is taken from the breast, we have to teach them not to feed it everything they eat themselves, that is, bologna, cabbage, coffee, and that sort of thing. The foreigners are great people to feed the babies coffee and bread and weak tea and all that kind of thing. That is the real trouble we have. As far as the mother going into the store and buying ignorantly or indiscriminately, or because a thing is a few cents cheaper, that is a mistake. The storekeeper will tell you she is the most discriminating buyer they have, for the simple reason she has to be. You can understand that where there is a family of six or eight—and they are notorious for having lots of children—and the husband earning from $10 to $15 or $18 a week, they have to be most careful. It is not because they are so intelligent, but it is the instinct to get as much as they can and the best they can for their money, and they learn it well. It is only out of life's experience, you know, that they learn, and they do learn this lesson very well, and they do not buy carelessly.

I will not mention just Hebe, but so far as compounds are concerned, we have no trouble with them.

I did not want to come here and talk on this just from my own experience, and last week, when I was asked to come here by certain club women and also by the Hebe Co., I went to my friend, Miss Edna Foley, who is superintendent of the Visiting Nurses of Chicago, and I said, "Now, I do not want to give any evidence that is not accurate; I have never been able to find a case where they had fed compounds to babies. Have you?" She said, "There has never been a case come under my observation." I said, "Will you make a survey for us, so we can be very sure about this?"

So last week she had her nurses make a survey of all the poor districts of Chicago, and this is the answer. I asked Mr. McKee if he would telegraph Miss Foley so I would not alone be responsible for the statement, and this is the answer, "Have no knowledge of any child or children fed with milk compounds in place of the forms of milk most commonly used," signed Edna L. Foley.

I would like to hand that to you, Mr. Chairman.

I also asked Dr. Anna Raines, who is chairman under me for the first district of the federation of clubs, if she would make a survey of the infant welfare stations. We have 20 stations in Chicago, to see if there is any case of compounds being fed there. She told me last week she had made the survey and found no record of compounds being fed to the babies. Now, that is as far as that goes.

It seems to me foolish to waste so much time on this discussion, because I firmly believe that so far as this compound is concerned—maybe this is not just germane to the question, but I believe it is a trade war. With that I am not concerned now. What I am concerned about, Mr. Chairman, are babies.

We all agree the whole pure milk is the best thing for the babies. I have the greatest regard in the world for the dairymen and farmers and for their milk, and I want them to have a fair price, and we want pure milk for it, and I believe they are doing their best in that respect.

I can understand it would not do to have all the dairies put out of business. We want more and better cows and more and better children. As the gentleman told us the other day, it rests on our shoulders. God knows we women have known that for years. He says, "you know we must have healthy children." I will go further than that and say that the best time to go about having strong children is 100 years before they are born. Then we are pretty sure to get a pretty decent race of people a little later on.

Suppose we take compounds off the market, what good is that going to do, Mr. Chairman, so far as milk is concerned? The people that I have to deal with can not afford to buy the milk. We taught them to use compounds during the war. We had to teach them to use compounds then, because we all had to use them. I prefer compounds to animal fat. I never have lard in my home. I do not like it. It does not agree with me. I am pretty husky, but

I never in my life have been able to drink milk, and yet I have survived. So it seems to knock that all into a cocked hat once in a while, when these things happen.

If you take the compound off the market, how is it going to benefit anybody? My people could not afford to pay the price of fresh milk, and I do not suppose the dairyman can afford to sell it for less. As I say, I am not particularly concerned in this fight between combinations, but I am only concerned about the babies. I have given 20 years of my life to this work. I have tried in a small way to take the place of Esther Finkelstein. You will remember, Senator McKinley, when she died. She gave her life to this work—fighting for pure milk, fighting for better babies. She came out of the Ghetto herself, and she knew about it from life's experience—a very good school. You remember, Senator McKinley, the legislature adjourned the day that Esther was buried, and you never saw such a heterogeneous funeral as that was. The governor stood at the head of her casket and Jimmie Finn at the foot; and Mayor Harrison was there, the fashionable women in their magnificent limousines, the poor Polish women with their shawls over their heads. Why were they there? Because they all knew what Esther meant to Chicago. It was one of the greatest losses Chicago ever sustained.

On the stone above her grave is inscribed: "Esther Finkelstein. She lived and died for humanity. She gave her life for the babies."

Now, what we want to ask of you is not to fool around—I should not put it that way, I know—what we would like is some real legislation, some legislation that would really mean something for our babies.

Now, these people will come to you and say, "We want to save the babies," but, gentlemen, we have heard so much of that in this settlement work. We have had lots of people come and talk to us that way, but when it comes to a show-down there is not much done. We have to make an awfully hard fight.

What we would like is some legislation that we could have faith in, legislation that would not take one compound off the market and leave another one on, or leave something that is not of any benefit to our babies. I do not believe in this chocolate-milk business and this condensed milk for our babies, and all that kind of thing. You are

going to take compounds off the market because you want to protect the dairy interests, but when you do that then the people that are using compounds—but they are not, as I say, the very poorest of the foreign born, but the middle class of working people. They are the ones who use the compounds and use them to a great extent, for the reason that many of these people, the very poorest and the laboring people, can not afford to take ice to keep the fresh milk, and so they have to use the compounds. If they do not have the compound, they are going to use water in the milk. They do get some sustenance out of the compound. Only a fool would say that the compound is as good as whole milk, but they do get some sustenance out of the compound. If you take that away from them they are going to use water; because they can not afford to pay the price of milk.

I am opposed to the Voigt bill in its present form, for the simple reason it takes this compound, which does not interfere with our babies' health, off of the market. What we would like to have is a substitute bill that would really protect our babies from these foods sold in the drug stores supposedly containing vitamines which really have no vitamines, and protect our children from this chocolate malted milk that really is not chocolate malted milk, and protect our babies from these baby foods, and protect our babies and young children from the ice cream that is made from skimmed milk. That is not contained in this bill. It seems this bill is aimed just at one thing, and that is what made we club women suspicious, and we do not agree with it. If they are really concerned with the health of the babies and of our babies, why not substitute a bill that would make it a penal offense to have anything deleterious to our babies?

Senator McKinley: That would cut off our coffee, would it not?

Mrs. Beal: No.

Senator McKinley: Is not that deleterious to our babies?

Mrs. Beal: Oh, yes; but that we can not do. We have to use some horse sense. Pardon me, Senator McKinley, I did not mean that personally.

Senator McKinley: I do not use it.

Mrs. Beal: Neither do I.

Another thing that concerns me—I have the habit of talking very plainly. I wish I did not. I wish I could say

[fol. 545] it more gracefully. Another thing that concerns me and concerns some of we club women—some of us make great sacrifices to help these women. I have given up many years that the children might have pure milk—but, I should not say myself. There are many who have had the same idea, and I am but a very small worker. But what concerned us was the fact that we were told by a certain young lady. I do not know but this lawyer will get after me for saying this, but he will have to do it—that it did not make any difference what evidence we produced that they would vote for the Voigt bill just the same. This young lady told this to a group of women at the City Club when we had a meeting to hear both sides, for and against the bill. Some of the club women who were very much interested wanted me to come down here and helped to pay my expenses because they felt they were not getting a fair show. I think there was some little mistake about that. Since I have come here and listened to you patiently listening to this very tiresome testimony at times, I think that is not true. I think you want to help the babies just as much as we do. We have had a long hard fight about this. I was one of those who fought to get the first $25,000 appropriation, and I thank God now that has been raised to, I think, $1,140,000 or something like that, which will make a great difference, and we want to go on helping in this way.

We want to help in every way we possibly can. Heretofore we have only been able to talk to you and to the different legislatures, etc., about it. Since we have the franchise we are able to help you in a better way, and that is all we want to do. We want to be helpful, but we want to have a bill that really seems sincere, that will take all those off the market, and not just one product, but all other products that might be injurious to the babies.

Another thing, gentlemen of the committee. What we would like would be municipal dairies. They have them in some other countries. That would be under Federal Jurisdiction. We want dairies where we could be sure of pure milk and that our people could buy it at a moderate price. That would be a godsend. Why, you could get the vote of every woman in the country if something like that was done. Then we would know this bill was really meant for the good of the babies and for the good of the

public. But when we find it is just one company trying to eliminate another we have absolutely no faith in it. We do not believe this is done just for the good of the babies. For, as I say, for every bit of clean whole milk we have had to fight right straight through. Not so much now as we used to, but we have to fight for it.

That is our attitude in regard to the Voigt bill. We do not want the dairies eliminated. We do not think it will make any difference in taking this product off the market, but we do think you will be taking a wholesome, nutritious food from people who can not afford to buy whole milk. That is what we need. If this is taken from the people, those who can not afford to buy the milk will have to use water, and that would be a loss to the people we are most interested in.

May I just add this, that in our last infant survey in Chicago—this is another thing that upsets the vitamine theory—statistics proved that the highest per cent of malnutrition was found in Hyde Park, where the folks can buy all the whole milk they want to—not down in the ghetto or in our settlements, but in Hyde Park. It is something to think about.

I am here entirely for what good we may get from legislation for our babies, but we are opposed to the Voigt bill in its present form because we do not think it will help or will get us just what we want. Thank you.

Senator McKinley: We will adjourn until 10.30 to-morrow morning.

(The following papers were ordered printed as a part of the record:)

Statement by Prof. Lafayette B. Mendel.

Filled milk as defined represents a mixture of skimmed milk (more properly designated separator milk in current practice) and an edible fat other than milk fat. The proposed legislation designates filled milk as "an adulterated and deleterious article of food."

The problem of adulteration, in so far as it involves a fraud upon the public is adequately met by legislation already provided throughout the country. Food products of the most diverse sorts which are dishonestly labeled or compounded in ways not evident from the claims made, continually come within the provisions of current laws

and regulations. Filled milk does not differ in this respect from any other milk product. The problem is one of enforcement of legal provisions already at hand and in no sense peculiar to filled milk; nor is there any occasion to make it specific for the latter.

Is a mixture of skimmed milk and edible fat a "deleterious article of food"? No one familiar with the science of nutrition or with practical dietetics will claim that either of the mentioned ingredients are other that wholesome foods. On the contrary, skimmed milk is a highly nutritious food product. The vegetable oils used in the production of filled milk are also admittedly nutritious. Filled milk—the mixture of two wholesome ingredients—as defined, therefore can not by any process of logic be regarded as a deleterious article of food.

A mixture of skimmed milk and of most vegetable fats differs from whole milk in having a lower content of vitamine A than does fresh whole milk, because part of this vitamine is removed in the separated cream. According to the published studies of McCollum, of Baltimore, and Sherman, of New York, skimmed milk contains about one-half of the vitamine A. A filled milk of the sort indicated would therefore, be essentially identical with whole milk in respect to its energy content (calorie yield), proteins, fats, sugar, and mineral nutrients, the most conspicuous difference being a lower content of vitamine A.

Filled milk is obviously more nutritious than unsupplemented skimmed milk, which latter to-day surely is not regarded as adulterated, deleterious, unwholesome, fraudulent, or otherwise than a valuable food. The adult finds numerous sources of vitamine A in his daily diet; He is not dependent upon cream for this factor any more than he must rely upon whole wheat or whole corn or unpolished rice for his supply of vitamine B. Or shall we legislate against flour and hominy and rice? Furthermore, I count it a misfortune to human welfare, an economic loss, and a detriment to the dairy industry that skimmed milk remains so largely a discarded product likely to find its way into the sewers and streams rather than into human foods through the encouragement of its use in cookery.

Why, then, should the attack be directed against filled milk, nutrively superior to the skimmed milk from which it is constituted? It is argued that the well being of chil-

dren demands a larger intake of whole milk than is currently customarily used. The truth of this contention does not militate against the use of either cream-free milk or the superior filled milk for the uses to which it is appropriately put. We should not legislate against the sale of meat or rice or cornstarch or lard or sugar, admittedly valuable foods, because they are not complete food in each instance and are not suitable for infants. I have never seen filled milk recommended as a steady diet for an infant. The allegations that it is dangerous in the sense of harm residing in a day's or even a few days' feeding thereof can not be defended. If skimmed milk is sold fraudulently, the practice is subject to police regulation.

The legality of the sale and use of filled milk should not be involved with the propaganda for better health through good food. Filled milk is not an unhealthful food. It should not be excluded on the specious claim that it is detrimental to public health, a claim which ostensibly rests solely on the fact that filled milk contains only about one-half as much vitamine A as does whole milk. How much vitamine A does a child or a human adult need? I am not familiar with any dependable evidence upon which a tenable answer to this question can be based. Our current knowledge is derived from experiments upon animals, mostly rats. They are highly sensitive to lack of vitamine A. In respect to the problem as related to man I may cite the recently published view of Prof. H. H. Mitchell, of the College of Agriculture, University of Illinois:

"In the total lack of quantitative data on the vitamine requirements of humans, and in the very general absence of malnutrition or disease among people of this country which can with any degree of probability be diagnosed as involving vitamine deficiencies, it seems premature to formulate recommendations for the balancing of diets with respect to vitamines. The richness of milk and butter in vitamine A, for instance, has been made the basis for an extensive campaign in favor of substituting these products in the diet for foods not so rich in this factor. That this vitamine is ever a limiting factor in human dietaries is questionable, and any statement to that effect is not based upon evidence, but upon uncertain analogy with laboratory animals. That human dietaries are so frequently deficient in the fat soluble vitamine as to warrant

general recommendations for an increased consumption of foods rich in this dietary factor is a presumption still further removed from fact. The latter statement may also be made relative to any of the known vitamines.

[fol. 546] "In regard to vitamine A in particular, the fact is sometimes overlooked that this seems to be a peculiarly growth vitamine, its functions in the animal body probably being confined largely, if not entirely, to the period of active growth. Adult rats have been maintained in good health for over a year on rations devoid of this vitamine as judged by current standards. At the Illinois Agricultural Experiment Station four sows have been maintained for nearly a year on a ration of white corn (Silver Mine) and tankage, and have successfully raised two litters of pigs each, though the ration, according to tests on rats, is nearly, if not entirely, devoid of vitamine A."

Lafayette B. Mendel.

STATE OF NEW YORK,
County of Delaware, ss:

Before me, a notary public of the State of New York, residing in the county of Delaware, personally appeared Lafayette B. Mendel, who, being duly sworn, deposes and says that the statement given above is true to the best of his knowledge and belief.

Lafayette B. Mendel.

Sworn to and subscribed before me this 27th day of July, 1922. In testimony whereof I have hereunto set my hand and seal the day and year aforesaid. [SEAL.] John C. Stoddart, Notary Public. Commission expires March 31, 1923.

Urbana, Ill., July 29, 1922.

The Honorable Chairman and Members of the Committee on Agriculture of the United States Senate, Washington, D. C.

GENTLEMEN: My attention has been called to H. R. 8080, known as the "filled milk" bill, pending before your committee, and I have carefully studied this proposed measure. I have been asked by a mutual friend to express to you

committee my views on this matter, this because of my long acquaintance with Senator McCormick, with whom I served as a member of the Illinois General Assembly, and because of my professional interest in pure-food legislation during the last 25 years of my professional career.

I must say that if a measure of the character of H. R. 8086 becomes the law it will, in my humble opinion, not be one of those laws which is conducive to the greatest good to the greatest number.

In an experience of over 30 years in the active practice of medicine in both the country and city districts I have had extended experience with the use of milk as a food, covering sources of supply, from the neglected farm barnyard to the first class, up-to-date, modern dairy.

About 20 years ago I spent practically one year in the Great Ormond Street Hospital for sick children, located in London, England, which is well known to be the largest of its kind in the world. I have learned that the subject of feeding is perhaps more important than that of medication.

In common with practically all physicians I realize that the stomach is not a crucible of the chemist. While chemical research is indispensable, yet practical experience in the matter of food values has made progress in the past few years which has produced much investigation and research by those interested in feeding. I have wondered if there is any real support for a measure of this character coming from the medical profession. I have never heard of it, and, on the contrary, believe that the medical profession would be unalterably opposed to legislation of this character for reasons which I shall here set forth.

A great demand for the best food for our growing population justifies the preparation of such foods as are sought to be prohibited by this bill, H. R. 8086, and which by the bill in its present form are falsely declared "deleterious."

From a long clinical and personal experience as the family physician of homes in this university city I have necessarily counseled with and sought the opinions of men connected from time to time with the University of Illinois in such departments as animal husbandry, dairy research, dietetics, etc. In a very recent conference with a recognized authority in dietetic chemistry at the University of Illinois I found that men who are competent to judge agree with me that the use of so-called "filled" milk" is not an alarming

practice. On the other hand, I learned that these chemists regard these foods as filling an entirely proper and valuable place in our American civilization which could not be otherwise supplied.

It is a well known fact now recognized that the purest cow's milk, even the whole milk, and even cream, is deficient in certain elements, namely, vitamine C, which is as important to the growth and welfare of the infant as are other elements in the milk. These elements must necessarily be supplied by the addition of other foods, i.e., fruit juices and cereals, for infant feeding.

There are those who insist upon full milk feeding for an infant up to 8 and 10 months of age. In my observation more deleterious results have come from such feeding than from adding additional elements of food prior to such age.

The subject of vitamines is so new in its discovery and so entirely undeveloped in the research which it has been possible to make in the limited time during which it has been a recognized element of feeding that it would be very fortunate if legislation prohibiting valuable food products should be predicated upon the very narrow and limited knowledge now extant upon this theory evolved by the chemists. The medical profession is not yet ready to accept as finished the judgment of the chemists on this subject.

While the so-called filled milk, such as Hebe and others, may not be used as a substitute for whole milk, as the label plainly indicates, it certainly should not be classed as deleterious, for the reason that it does contain certain quantities of the vitamines essential to human growth.

One authority in chemistry at the University of Illinois for whose opinion I have profound respect maintains that there is a considerable quantity of vitamine A in the skimmed milk which enters into the composition of milk compounds on the market, and that even such preparations used for infant feeding would be permissible. As a physician I indorse this opinion.

Personally, I have had many experiences where the prepared foods have supplanted the pure milk with the most happy results. The far-reaching effect of legislation carrying with it an impression to the public, as it necessarily would that such articles as are aimed at in the proposed bill are "deleterious," and that only whole milk is a food, has at least the semblance of legalization that would create an impression which in the end would be as harmful as the

proponents of this measure intend it to be beneficial to the general public.

In other words, the determination of what is and is not proper food, even for infants, in all cases is not reduced to such a science as will justify legislation attempting to define it, so long as there is nothing actually poisonous in the food product affected.

I need not suggest to my good friend, Senator McCormick, who knows perhaps better than I the devious ways and methods of legislation designed to foster one industry at the expense of another. But the fact that a large number of physicians have made a study of food values and infant feeding and the milk question, and that it has been a subject of great importance for at least 10 years last past, certainly justifies the conclusion that if there was any great danger in the use of many of these clean foods, so-called substitutes, as is alleged by the proponents of this bill, there would no doubt be a general sentiment voiced by the medical profession ere this in support of such legislation. To my knowledge, there is no such medical support.

I beg to modestly suggest that authorities on dietetics and experienced members of the medical profession are much more reliable upon the subject of food legislation than are the theories of chemists at any rate in cases like this, where the subject has not been sufficiently developed by the profession of chemistry to give us any reliable data sufficient to supplant the established theories gained from our long experience.

So many fads and fancies with respect to foods and similar attributes of human life have come and gone that it is common experience to find scientific men reversing themselves within a few years on important subjects concerning which they first formed very definite opinions, and the reversal of opinion by a scientist can be indulged with much less embarrassment than can be done by a legislative body which has gone on record by a formally adopted law.

While I can only speak as a physician, yet I would only be too glad to have the committee call upon such men as Professor Wilson, who goes this year from the University of Illinois to the University of Michigan; Dr. H. H. Mitchell, who has been conducting experiments on this new theory of vitamine at the University of Illinois; and Dr. J. H. Beard, who is the health officer at the university, and who has a combined knowledge of chemistry and medicine which

would be of special value in forming his opinions; also there [fol. 547] are many practical men engaged in the dietetic and chemistry work in the animal husbandry departments at our various State universities who will support me in the opinion that science has not developed this subject of infant feeding to such an extent as to justify any legislation which will affect an article of food not actually poisonous in itself.

I hope your committee will understand that many articles incompatible in the crucible are properly assimilated through the digestive tract for reasons yet unexplained by scientific research.

With profound respect for the integrity which I am sure your committee will exercise, I am,

Very respectfully,

W. F. Burres, M.D.

(Whereupon, at 4.40 o'clock p. m., the committee recessed to Thursday, August 3, 1922, at 10.30 o'clock a. m.)

Filled Milk

Thursday, August 3, 1922

United States Senate, Subcommittee of the Committee on Agriculture and Forestry, Washington, D. C.

The subcommittee met, pursuant to adjournment, at 10:30 o'clock a. m., Senator William B. McKinley presiding.

Present: Senators McKinley, Ladd, and Kendrick.

Senator McKinley: The committee will come to order.

Mr. Jackman: I will call Dr. Eugene E. Aggar, professor of political economy, Columbia University.

Statement of Prof. Eugene E. Aggar, Columbia University

Mr. McKinley: Go right ahead, Doctor.

Doctor Aggar: Perhaps I ought to say, first of all, to the members of the committee something about the circumstances under which I became interested in this question, so you may see the viewpoint from which I approach it.

I was asked to make an impartial study from an economic point of view of the question that is before you, in order

to give the benefit of such an impartial opinion to those interested. Of course, as a scientific man I could not undertake to make a study on any other basis, and what I have to say is based upon a careful, impartial study made in that way.

As an economic problem the question before you presents itself in two aspects, what may be called, first of all, the social economic aspect, and secondly, what may be called the purely business economic aspect, and a word or two may be said about each of these aspects in turn.

From the social economic point of view perhaps the most urgent problem that has always faced humanity has been that of the so-called cost of living. Those of you who are interested in the subject of political economy will recall the Malthusian doctrine of population as expressed by Sir Thomas Malthus back in the eighteenth century, when studying conditions in England. He reached the conclusion that the tendency of population is always to outrun the food supply, and he worked it out in a mathematical relationship, showing that population tended to increase 2, 4, 16, or the geometrical ratio, and food supply tended to increase 2, 4, 6, or the arithmetical ration, and he finally said it is only positive checks like vice, poverty, and crime that keep population within the possibilities of the food supply of the area occupied by it.

Well, since Malthus's time we have had a tremendous revolution in economic life. The period since that time has been referred to as the economic revolution or the industrial revolution, the whole era. The steam engine has come in and there has been a release apparently of the pressure on the population, and yet all social students agree that the general tendency which Malthus noted holds good, and we can just look into the development of population since Malthus's time and see that his general doctrine, apart from the mathematical preciseness that he has attempted to give it, does hold good. The western world in 1800 had a population of about 73,000,000 people. Now, it is well over 100,000,000. The countries of Europe have increased in that time, England from 14,000,000 to something like 45,000,000, France from 15,000,000 to something like 40,000,000 or 45,000,000, the States making up the German Empire from 13,000,000 to something like 60,000,000.

That has been the tendency of western civilization—a tremendous increase of population. And all economists agree that the only way that the standard of living attained by a people can be maintained or advanced is by having [fol. 548] the whole process of wealth production keep moving faster than the tendency of the population itself to increase.

Now, it is in connection with this problem that the cost of living, the bearing of the pressure of population on natural resources and subsistence, that I take it this problem presents itself to us in the matter before us.

Even in the United States we hear a lot about the problem of the cost of living and attempts made to solve it in one way and another. Of course, it is complicated to-day by various aspects, so that it is a confused problem, but basically we all recognize there is that important problem before the American people—keeping down the cost of living.

As I see it the production of this which we call a milk compound makes a contribution here to the solution of this problem of the cost of living. It does that in two ways.

In the first place it tends to make directly available as human food skimmed milk which has, as far as I have been able to find in a close study, heretofore gone very largely to waste.

I think there is no dispute to-day as to the food value of skimmed milk. It has about two-thirds, authorities say, of the total solid content of whole milk. Just the fat is extracted, but the protein and calorie values are very high.

The Department of Agriculture gives in round numbers about 28,000,000 pounds of residuum for the year, 1918. Taking those figures, which were the figures which we used at the time I made this study, that represents a protein value of 913,000,000 pounds, or approximately the equivalent of 8,000,000,000 pounds of beef, which comes close to the annual consumption of beef in the United States.

Now, this food value seems to be, as far as we can learn, very largely wasted. The department figures show that during 1919 only about 5.6 per cent of the skimmed milk residuum in the country was directly used in the process of manufacture; that is, in the condensing or making of powder or in the making of compound.

There are obvious difficulties in the bringing of skimmed milk to human use. It is uneconomical to bottle it. It is

not worth enough to make it profitable to market it in that way. It is difficult to sell in bulk even when it is permitted to be sold. People will not go and get it.

There is a prejudice against it, dating from the time when it was thought to be largely a waste product, when its food value was not recognized; and then the practice of fraud in the marketing of it which has in some jurisdictions led to the complete prohibition of its sale.

While there are no estimates available as to the direct waste, there is considerable testimony from creameries and producers generally that there is a terrific waste in the creameries. Often it is thrown in the sewer, we discovered, at some of these places. On the farm it is very loosely handled, so there is a very considerable direct waste. Of course, a lot of it is fed to stock. Pork feeding, according to the authorities, is the most economical feeding of stock, but according to so good an authority as Jordan in his "Feeding of Animals" the estimate is that for human consumption through the intermediation of pork only about one-fifth of the food value comes back.

Now, beyond making the skimmed milk available as a human food in this way, these compounds also broaden the possibilities of use of the relatively cheap vegetable fats. The need of fat in diet is a very interesting study in itself. Apparently when fat has become an element of diet people—not all people depend to the same extent upon fat—but when it has entered into diet apparently there is a strong need for it.

Prof. J. Russell Smith in his "Food Resources of the World" estimated that three years after the war began the average adult of Europe, Germany particularly, lost 45 pounds because he did not get the fat to which he was accustomed.

Then the fats are used in cooking and baking, not only from the fat point of view, but from the point of view of the mechanical processes involved in cooking and baking.

There has been an enormous increase in the use of fat to which Prof. J. Russell Smith calls attention in his very interesting work on fats, and he says there has begun a tendency to substitute vegetable fats for the animal fats. He brings out the fact that they are perhaps, if anything, slightly more digestible than the animal fats, and he says they have approximately the same caloric value.

These milk compounds, from the marketing point of view seem to solve a problem which has not been solved in the distribution of skimmed milk heretofore.

As I understand it, these compounds are in sealed tins, sterilized, and can be kept and easily distributed far from the source of supply, so there is a real economy in distribution, as well as in food consumption.

An associate of mine made a calculation as to food economy, and as a result of that calculation it appears that 10 cents per pound—we used those figures because they seemed to be those which largely prevailed for the selling price of this product—at 10 cents a pound the protein value of a pound can is equal to that of eggs at 28 cents per dozen and of sirloin steak at 23 cents per pound.

The caloric value is equal to that of eggs at 14 cents a dozen and to sirloin steak at 14 cents a pound, or the same as one quart of 3.97 per cent whole milk.

Roughly, a pound can of compound just about offsets from a food and caloric point of view one quart of whole milk.

The objections from a scientific point of view seem to still bear largely on the question of fraudulent sale, fraudulent substitution of compounds.

Now, as to the properties, we are dealing with a question of fact which requires a very careful and broad scientific calculation and investigation to determine, but, taking it from the point of view of the general organization of our economic system, it seems safe to generalize to this extent at least, namely, that no industry that has its future based upon fraud stands a chance in our present system.

The father of political economy, Adam Smith, pointed out that exchange disciplines all of us. Today we are all specialists engaged in a particular line of occupation and our success as specialists depends on our winning the market and winning the good will of those with whom we deal, and in the long run, therefore, the very philosophy of our present system puts the emphasis upon service as the road toward success for the individual.

That does not mean, of course, that people do not sometimes practice fraud and get away with it for a time, but I think it was President Lincoln who said, although it is sometimes attributed to P. T. Barnum—and in saying it, of course, he adopted this philosophic doctrine that Adam Smith spoke about—that you can fool some of the people

all of the time and you can fool all of the people some of the time, but you can't fool all the people all the time. That is a basic economic fact which touches upon the whole organization of our economic system.

So that from the point of view of the whole theory of the organization of modern economic life it would seem fair to say that no industry based upon fraudulent sale has a ghost of a chance of anything like permanent success.

Then we run across certain criticisms that there is an exploitation of the ignorant; that this product was substituted for whole milk, or the evaporated whole milk, or condensed milk, and people who could not read signs, despite what the labels might say, would be misled.

There again it seems to me that that criticism is not very strong, because the growth of this business depends upon advertising and advertising today is a matter of appealing through striking signs and literature to the intelligence and understanding of people, and if people are too ignorant to read labels, why they can not be seriously affected by advertising.

So much for the general social economic aspects. Perhaps even more interesting, and, from some points of view, more vital are some of the purely business economic aspects. That is, we differentiate between social economy and business economy, because in social economy we look at it from the general point of view of welfare, whereas in business economy it is a question of relative profits, costs, expenses, etc.

Our investigation—I speak of "our" because I have an associate who helped me in gathering some of the facts on which my conclusions are based—our investigation brought out that the business is largely new; it is hardly more than six years old. The 1920 production, the time as of which we made our study—it was the last year for which we could get figures—was about 85,000,000 pounds. In that same year the output of condensed milk and evaporated milk was 1,578,000,000 pounds. In other words, the entire compound output represented about 5.4 per cent of the whole output of condensed and evaporated milk.

Then a most careful study led us to the conclusion that the consumption of compound apparently had very little effect on the consumption of condensed milk or evaporated [fol. 549] milk. The consumption of condensed and evap-

orated milk to begin with is relatively small in the United States, despite the impressive figures of the total national product. That is, it runs, as far as an estimate can be made, from 10 to 11 pounds per capita for the year 1920, and while there are no official estimates, according to the best trade estimates we could get, not more than about 10 per cent of the population use condensed milk or evaporated milk. So that there is an enormous market here apparently still before this branch of the industry, namely, the condensed and evaporated branch.

Whole milk consumption is, of course, as we all know, too small. The figures run, I think, less than a pint per capita per day for the United States.

Now, the business origin of the milk compound business was found, of course, obviously in the cheap skimmed milk supply, but that had to be made available in a much more useful form than in its raw state, so that a special compounding process was developed in order to reintroduce the fat content that had been abstracted when the milk was skimmed and, as we found, that is the mechanical basis of the industry, a process which successfully emulsifies the fat and makes a homogeneous compound; not one where the fat is separated from the milk.

Then next from a business point of view we learn that it became necessary to find a market for this product, and this market was found in the creation of a new field, as far as we could discover, namely, that of cooking and baking. And here, of course, extensive advertising has been carried on, and from all we could learn the advertising seemed to be thoroughly aboveboard.

Of course, the market possibilities are large. The demand in the cooking and baking field is one that could be systematically and extensively developed from a broad economic standpoint. It is apparent from the consumption of whole milk that very little whole milk is to-day used in cooking and baking; that is, the per capita consumption is not in excess of a pint per day, and that means whole milk is more or less of a distinctive product and — compound could hardly be regarded in any sense as a competitor of whole milk.

The skimmed milk alone, of course, is difficult to get and is impracticable to use in cooking; it has not the shortening agencies, and lard or some other shortening substance would have to be introduced.

As we understand it, this emulsified product makes an ideal combination of the skimmed milk and the fat.

The supply of skimmed milk, of course, is large. According to 1920 figures it is possible to increase the compound business 1,500 per cent before the immediate skimmed milk supply would be used up. Of course, the supply of vegetable fats is large. We are increasing our own output in this country of cotton seed oil of the South, the peanut oil of Virginia and some other States, and there is no apparent reason why in the course of time they could not be used as well as coconut fat which is used at the present time.

As we seem to find, the coconut fat of to-day can be obtained in the most available form, and that rather explains its use.

It was very interesting for us, and probably will be for the members of the committee, to find that the compound market could hardly be regarded in any sense as competitive of the condensed milk or evaporated milk.

There are several points that have to be alluded to in this connection. From the manufacturing proposition, that is, from the point of view of those immediately interested in making and selling it, it appears that the two are complementary rather than competitive.

One of the largest producers of condensed milk and evaporated milk to be found was also the largest producer of compound. Then we had access to the sales and advertising records of this large producer, and an experiment was conducted by them in three large cities on a basis of joint advertising campaign. This was preliminary to our advent into the case and we simply looked over their sales records and cost records in this connection. It appeared from those records that the sales of condensed and evaporated and of compound moved up and down together; that is, when one increased as the result of an extensive advertising campaign the other increased and when one diminished the other diminished. So that on the basis of that experiment it was demonstrated that in those three large and midwestern cities, at any rate, the sales were not competitive nearly so much as they were purely complementary; that is, they went together.

Now, the cost of production. I may say we have had access to the books ourselves and have examined them ourselves of the largest producer of this compound and found the costs to be almost the same, or as close as they could be.

The cost of the fats seemed to be the main difference; that is, the cost of the vegetable fat is, of course, cheaper than the butter fat. We found very little profit difference in the manufacture. The fat difference was controlling and indeed, although it would take a more extensive survey, over a longer period of time and perhaps over many more accounts than we made—but on the basis of a pretty careful study of the records of the largest producer, it seemed to us that on the whole the condensed and evaporated represented a more profitable line of enterprise than the making of compounds.

Of course, then it interested us to inquire whether this difference in cost accrued in any way to the benefit of the consumer or whether it was one which simply went into the pockets of the producer as a profit. To discover that we took sales and price records. We had to take wholesale price records because retail prices fluctuate so much from neighborhood to neighborhood, with advertising campaigns of one kind and another, but taking the wholesale prices for the 12 months ending December 30, 1921, the normal difference between evaporated and compound was 3.3 cents per can; that is, there was an average of $1.50 per case on a 48-pound case. That is, there was that difference in price.

I have to quote these figures because I do not want to say anything except in connection with what we ourselves studied. What the price development may have been since the end of those 12 months ending December 30, 1921, I am not prepared to say; but for those 12 months there was the average difference of $1.48 per case or 3.3 cents per can.

As I said before, retail prices possibly varied some, according to the sales policies of different stores.

Another very interesting question that we encountered in this connection and concerning which we tried to arrive at some independent unbiased opinion was that of the effect of the development of this industry upon the dairy industry as a whole, which seems to be more or less a contentious question. Well, first of all we calculated that the compound represents about 92 per cent of dairy products, somewhat more, I think, than ice cream, which is usually classified as a dairy product. Then we come to the conclusion, on the basis of certain lines of study which I will later allude to, that the chances were that the dairymen will get a higher price for their milk in the long run with the development of this business than they would without it.

First of all there was the broad conclusion based upon our study of economic history in general of every industry for the by-products of which there has been discovered or uncovered a useful market that it has benefited by the uncovering of that market.

I need refer simply to what cottonseed oil has meant to the planter of cotton or what the meat industry has done in the use of by-products there. Broadly, it stands to reason that the more extensively the products of an industry can be marketed, the more stable and uniform and successful that industry is going to be.

But more specifically we examined certain results that seemed to be analogous, where milk was to be used at creameries, where the butter fat alone was wanted, and where the milk was to be used at condenseries and evaporating establishments where the whole milk was wanted, and again based upon prices in—we used Hoard's Dairyman prices and cost statistics that we could get hold of—we learned that the prices paid at condenseries and at the creameries are almost uniformly higher—I mean to say the condenseries and evaporating establishments are almost uniformly higher than the prices paid at the creameries where the butter fat alone determines the basis of the price paid.

Then we found, too, that the farmer himself attaches a very low food value to skimmed milk. As I say, there are no reliable estimates here, but numerous creamery people told us that they could get all the skimmed milk they wanted from the farmers if they would offer them from 15 to 25 cents a hundredweight for it. They would not take it back to the farm if they could get such a price, and that seems to indicate that the farmer is not particularly concerned for himself about the feed value. Of course, not all farmers keep stock to which the skimmed milk could be fed.

Then it seemed to us also in view of the very nature of the dairy industry, that the development of the compound business would help to stabilize it. The production tends to be largely seasonal, whereas the demand for whole milk is more or less uniform from season to season but, of course, the seasonal surplusage is taken care of to some extent in butter making and condensing and evaporating, but it [fol. 550] seemed to us that the development of the compound business would make its contribution there by making the market steadier and more uniform.

And then there were reasons to believe, it seemed to us, that all the advertising in connection with compounds and the other types of milk too would make some contribution toward the increase in the consumption of whole milk itself. People know more about the value of whole milk to-day than they ever have known before, and the value of such milk is attested, it seemed to us, even by the advertising of such products as this compound.

We tried to analyze some of the objections we encountered in going over such testimony as seemed to us to have an economic bearing, and the most frequent objection we heard was that of flooding the butter market. There seemed to be an opinion among some dairymen that you run a risk here of flooding the butter market. But so far as we can see there is no reason to expect the manufacture of one additional extra pound of butter as the result of compound manufacture. It is simply a question of who is going to make the butter. Will it be made at the compound factory which sometimes buys the whole milk in order to get the right quality of skimmed milk, or will it be made at a creamery or will it be made on the farm?

Indeed, it is reasonable to think from past experience in industry that the concentration of butter would be a much better thing for the butter industry as a whole and would promote scientific research and more careful production.

Then there was another angle of it that interested us. If we assume an annual increase in population of about 1½ per cent for the United States this means, if the per capita consumption does not increase at all, an annual increase in butter consumption of 22,000,000 pounds per year. That is, the per capita annual consumption is about 14.6 pounds. Now, 1½ per cent increase in population would mean roughly about 22,000,000 pounds more of butter per year. On this basis, that is, just to supply this increased need for butter, there would be required an increase of 244 per cent in the manufacture of compound, assuming that the compound people diverted all their butter fat to the manufacture of butter, but our study brought us to the conclusion that the butter is still very narrow. A per capita consumption of 14.6 pounds per annum is a very small per annum consumption.

The demand for butter is what the economist calls elastic; it is one which will grow rapidly as concessions of price are made. So there does not seem to us to be any warrant from

an economic point of view for considering a danger of flooding the butter market through an increase in the manufacture of compounds.

It is a rather picturesque and more or less amusing objection—and this is the last point I have to refer to—the so-called coconut cow will displace the American cow.

Well, as a matter of fact, only 5 per cent of the total importation of coconut fat during 1920 was used in the manufacture of compound, and, of course, this coconut fat is in a sense an American cow; that is, most of it comes from the Philippines, which is an American possession.

Then, of course, the market for American vegetable oils is going to be broadened by this compound. As I said before, there is no particular reason, as I understand it, for the constant employment of coconut fat. Any of the vegetable fats could be used with adaptations of process to them.

So that to sum up, looking at it purely as an economist, I say that the compound manufacturer seems to make a real contribution from the social economic point of view in that it broadens the whole basis of consumption and makes available a food product which would otherwise, at least largely, go to waste.

From the business economic point of view, so far as all the facts and analyses we were able to make, they led us to the conclusion that it implies the development of an adjunct of the dairy business which will make a great contribution in the long run to the development of the dairy industry, and in no sense—ruling out temporary fraud, etc.—could it in no sense be regarded as a detriment to that industry.

Senator McKinley: Gentlemen, have you any questions to ask?

Mr. Bryan: You testified in the Wisconsin case, did you not?

Doctor Aggar: I did sir.

Mr. Bryan: Have you testified elsewhere on this matter elsewhere than in Wisconsin?

Doctor Aggar: Yes; that is, I spoke before a legislative committee at Albany and one at Trenton.

Mr. Bryan: And what was the result?

Doctor Aggar: I am not sure. I have not followed that. I am not so interested in that aspect of it.

Senator McKinley: I do not like that kind of question. I am going to protect Doctor McCollum when he goes on, but

if you want to start this kind of examination, I will let the bars down.

Mr. Bryan: It simply means ——

Senator McKinley: You mean he testified, and the legislature did something else?

Mr. Bryan: Yes; he testified in two instances, and the courts in each case decided against his view.

Doctor Aggar: I happened to read the referee's conclusion in the Wisconsin case. Does the gentleman mean that was unsuccessful?

Senator McKinley: Suppose you read it.

Doctor Aggar: Perhaps to answer his question I should say that both at Albany and at Trenton the time of the committee was so limited that I think I had two and a half minutes at Trenton to present matter based upon several months of study, and whatever the result was there it could not have been much influenced one way or the other by my humble testimony.

Mr. Bryan: As the committee desires it, I would be very glad to read the salient parts of the court's decision.

Mr. Jackman: No; read it all.

Senator McKinley: Not the court's decision, but the referee's decision.

Doctor Aggar: I testified before the referee, and the referee's findings of fact bore on any testimony I may have given, so it seems to me the only thing that would be relevant here would be the referee's findings.

Mr. Bryan: So far as the court accepted the referee's opinion.

Senator McKinley: You can either stop or read it in as you said you wanted to.

Senator McKinley: Read the referee's decision or do not read, either one of the two. I do not like this kind of testimony, to start with. If you want to drop it, all right.

Mr. Bryan: I submit, Senator, this is not beyond the limits of cross-examination as understood in every court in the land.

Senator McKinley: This is not a court. We told you we were not lawyers.

Senator Kendrick: My idea is, if I may suggest, that Mr. Bryan had asked the witness whether or not after his testimony the referee had been favorable or otherwise.

Mr. McKinley: He does not say referee.

Senator Kendrick: If he had asked the question, it would have been an entirely legitimate one, because it would not have been a thing of inference; it would have been a direct question whether or not the opinion of the referee had been favorable or otherwise.

Mr. Bryan: That is entirely correct, sir; but I just call the committee's attention to the fact that the final decision is made by the court, which adopted, in large measure, the referee's opinion, and in certain other respects, I think, rejected it.

Senator Kendrick: I think we might as well leave it out of the record. It is here for the examination of anyone who wants to study it, and it would enable us to hurry on that much more.

Mr. Bryan: The Wisconsin court did not decide questions of law but decided questions of fact, and in large measure accepted the referee's decision.

Senator McKinley: The Wisconsin court decided, did it not, that it was in the interest of the dairy interests to protect the dairy interests, and that the legislature had the power to do that, and they backed up the legislature?

Mr. Bryan: And that the facts on which the legislature acted the reasons were sound.

Mr. Jackman: No.

Mr. Bryan: I would be very glad to read the entire opinion.

Senator McKinley: You will not read what we want you to read.

Mr. Bryan: I will read the whole thing if you care to hear it, but it would take a terrible long time.

Senator Kendrick: I think we had better just go on.

Senator McKinley: Yes.

Mr. Jackman: We will find the referee's findings and put them in the record, and that will save dispute.

[fol. 551] Mr. Bryan: You can read your part, and I will read what the court said.

Mr. Jackman: No; we will put it all in.

Mr. Miller: For the purpose of saving time the whole report might go in evidence and either party can refer to it.

Mr. Urion: We have here a copy of the referee's report, and as it seems pertinent we will put it in the record without reading it.

Senator Kendrick: It might be of interest to point out that to include these voluminous reports means a great expense; and where it is unnecessary to include them we

ought not to undergo that expense. It is with the chairman. I am agreeable either way.

Senator McKinley: I think if both sides are going to base their case largely on the Wisconsin decision, and as this is going to the full committee—I think for the benefit of the rest of the committee the referee's report and the decision should be included in the record, where they can see it.

Mr. Bryan: We are entirely agreeable to that, sir.

Senator Kendrick: All right.

Mr. Urion: Do you wish to have it read?

Senator McKinley: I do not think so. You want the decision to go along with it?

Mr. Bryan: Yes; the referee's opinion and the decision of the court.

Mr. Jackman: May I state that this decision was handed down after the Supreme Court of Wisconsin had adjourned, and there are in process of preparation, I am advised, by justices of the supreme court, certain opinions by other members of the court dissenting and others joining in the dissent which ought to go in the record when they come down?

Senator McKinley: It is the ruling opinion.

Mr. Bryan: This is the majority opinion, is it not?

Mr. Jackman: There is an opinion and a concurring opinion, and then there are dissenting opinions which, under the practice in Wisconsin, will be filed. They may be filed at any time.

Mr. Bryan: How many dissenting opinions are there, do you know?

Mr. Jackman: I have not any idea. I know Judge Eschweiler is preparing a dissenting opinion, and I am advised there are certain other justices who may either join in his dissenting opinion or write separate dissenting opinions.

Senator McKinley: I will say, personally, I was very much impressed with Doctor McCollum's statement and the statement of the other men here. I was impressed yesterday with the doctor from Chicago, and this gentleman has made a very interesting statement; and the question of whether another bunch of politicians decided one way or the other would not have the slightest impression on my mind.

Mr. Bryan: I am not referring to a bunch of politicians, Senator. I am referring to the Supreme Court of Wisconsin.

Mr. Jackman: You can include them.

Senator McKinley: Yes; I will include them.

Mr. Jackman: Because in Wisconsin everybody is a politician.

(The report of the referee is as follows:)

State of Wisconsin. In Supreme Court. State, ex rel Carnation Milk Products Co. and the Hebe Co., plaintiffs, *v.* J. Q. Emery, as dairy and food commissioner, defendant.

Report of A. G. Zimmerman, Referee Herein

I, A. G. Zimmerman, referee herein, pursuant to an order made by the supreme court herewith returned, directing me as referee "to take the evidence offered by the parties and report the same to" the court with my "conclusions of fact thereon," herewith report the testimony taken and proceedings had in said cause before me November 17 to December 1, 1921, inclusive, and finally on January 23, 1922, the record and hearing of such proceedings in full being herewith submitted.

Referee's Findings of Fact

I further report that after having received plaintiff's request and defendant's request for detailed findings respectively submitted to me by them December 8, 1921, as herewith submitted, and after having examined the same in connection with the record of the testimony, all such requested findings of both plaintiff and defendant are refused seriatim and in toto, except as included in the following paragraphs numbered 1 to 27, inclusive, which I herewith report and find as my completed findings of fact:

1. That the relator, the Carnation Milk Products Co., is a corporation organized under the laws of the State of Delaware, with authority to manufacture evaporated milk and milk compound, with principal offices at Seattle and Chicago, and is duly licensed to transact business in the State of Wisconsin. That it has six plants in Wisconsin, including one at Oconomowoc and one at Jefferson, Wis., and that the value of such two plants approximates $650,000.

2. That the relator, the Hebe Co., is a corporation organized under the laws of the State of Washington, with offices at Seattle and Chicago, and is duly licensed to transact business in the State of Wisconsin.

3. That the Carnation Milk Products Co. manufactures for sale evaporated milk at its plants in Wisconsin and elsewhere, and that it also manufactures at its plant at Oconomowoc and Jefferson the Hebe compound and sells the entire product of Hebe to the Hebe Co.

4. That the Hebe Co. sells the Hebe compound to jobbers and wholesalers only; but its representatives take orders for the product from retailers, which orders are filled solely by the jobbers and wholesalers.

5. That "Hebe compound," designated also as "Hebe," is a compound consisting of about 92.2 per cent of skimmed milk or buttermilk and 7.8 per cent of vegetable fat consisting of pure highly refined coconut oil, and is similarly manufactured and is subject to a similar evaporating process as evaporated milk. That the cost of manufacturing is about the same, except that the cost of materials in Hebe is less. That the cost of the additional machinery and equipment employed in the manufacture of Hebe is approximately $50,000 in each of two plants.

6. That Hebe is packed in hermetically sealed cans of two sizes, known as "tall," containing 1 pound avoirdupois, and "baby," containing 6 ounces, and these cans are packed for shipment in cases holding 48 large cans and 96 small cans, respectively. That each can has affixed to it a label, a sample of which, with the printed matter thereon, is attached to folio 12 of the complaint, and in each case is placed inside and on top of the cans a printed notice, a sample of which is attached to folio 14 of the complaint; that such labels and printed notices, among other things, describe Hebe as a compound of evaporated skimmed milk and vegetable fat.

7. That there have been manufactured and shipped Hebe in Wisconsin, as follows: In 1918, cases 4,520; in 1919, cases 10,461; in 1920, cases 12,062; in 1921 to October 31, cases 6,616. And manufactured in Wisconsin and shipped in this State and elsewhere in interstate commerce, in 1918, cases 563,353; in 1919, cases 725,921; in 1920, cases 739,161; and in 1921 to October 31, cases 413,526.

8. That the amount and cost of skimmed milk purchased and used in the manufacture of Hebe is as follows: In 1919, 1,999,576 pounds, at $22,770.15; in 1920, 4,263,085 pounds, at $28,878.86; in 1921, to September 30, 3,604,509 pounds, at $25,669.61. That there was purchased from the University of Wisconsin skimmed milk, in 1919, 89,084 pounds, at $779.35; and in 1920, 160,530 pounds, at $1,029.95. That additional skimmed milk required in the manufacture of Hebe was obtained by the purchase of whole milk from which all but one-tenth of 1 per cent of the butter fat was extracted out of which butter was manufactured and sold.

9. That the approximate average difference in prices at which Hebe and Carnation evaporated milk are sold to jobbers and retailers is about $1.25 per case less for Hebe, the difference being perhaps more often more than less; and sold by retailers to consumers Hebe, per can, from 1 to 3 cents less than Carnation, but sometimes compounds are sold at the same price as evaporated milk.

10. That the manufacture and sale of Hebe does not appear to have interfered competitively with the sale and increased sales of Carnation evaporated milk in Wisconsin and elsewhere in interstate commerce. That Hebe has been manufactured and sold for about five and one-half years, and perhaps was the first generally sold compound of skimmed milk and vegetable oil on the market. That Carnation evaporated milk has been on the market about 20 years. That there are about four or five other similar compounds made and sold in Wisconsin.

11. That by means of laboratory and other investigations and dietary experiments with animals especially, and [fol. 552] particularly during the past dozen years or so, with variable results and changing conclusions from time to time as the investigations and experiments proceeded, chemistry specialists and dieticians have apparently demonstrated that, in addition to the long-established abundant protein, calorie volume, and various salts necessary for a well-balanced diet to obtain proper nutrition and growth, there is required in the diet an additional element or "productive substance" of comparatively recent discovery, named in 1912 "vitamines." That these are vitamines A, B, and C, and are also referred to as fat soluble A and water solubles B and C.

12. That the vitamines B and C apparently appear in sufficient and uncontroverted amounts, for the purposes of this case, in various ordinary foods, including whole milk, evaporated milk, and the Hebe compound.

13. That vitamine A, according to present information, is apparently most abundant in cod liver oil, after which milk and the butter fat thereof and perhaps the yolk of eggs come next in amount contained therein; and that then other foods apparently containing lesser, though considerable and advantageous, amounts of vitamine A are the vital organs of animals, as liver and kidneys, also fat meats, tomatoes, lettuce, onions, green vegetables, as cabbage, more particularly the outer green leaves thereof; spinach; also vegetable roots, as carrots and yellow turnips; parsnips; sweet potatoes, potatoes, perhaps; skimmed milk, not more than one-half as much as in whole milk; butter, cheese, evaporated milk, and various other foods.

14. That there appears to be a deficiency or absence in demonstrable amounts of vitamine A in the following: Lard, tallow, vegetable fats generally, as olive oil, cotton-seed oil, coconut oil; lean meats; oleomargarine, cereals, generally; bread, especially white; potatoes, perhaps; polished rice; sugar, and various other foods.

15. That the presence, absence, amount, and effect of vitamine A in different foods seems to be more or less variable, approximate and uncertain; that, for instance, one of the two, perhaps, most eminent scientists and authorities testifying, holds in effect, that the vitamine A element in foods is quite limited and restricted and that, as a specific instance, so common a food as "potato" contains no demonstrable amount, while the other maintains that vitamine A is very widely distributed and that "potato" has an abundance thereof.

16. That the compound Hebe appears to be deficient, as compared with milk, in vitamine A, in that the coconut oil therein contains none and the skimmed milk therein contains not more than one-half as much as the whole milk from which it is obtained, and that the application of heat and oxidation in manufacturing may somewhat reduce the vitamine A content. . . .

17. That the compound Hebe contains abundant protein, caloric volume, various salts, and vitamines B and C, suffi-

ciency of all the other elements apparently required to make a food complete as well as wholesome.

18. That the compound Hebe is not harmful or deleterious as a food for human consumption either for adults or children; but that Hebe, though not in itself harmful, is not a desirable or proper food for use as a beverage for infants or as a complete substitute for milk, because of its lower vitamine A content.

19. That the compound Hebe is a wholesome food product for human consumption in the sense, for instance, that bread, potatoes, or lean meats, or cereals, or fruits, are wholesome foods, each for their various uses and purposes; and that the use and purpose of Hebe as a food is especially in cooking and baking for its additional or substitutional protein, caloric, and shortening values.

20. That the compound Hebe is similar in taste, odor, appearance, consistency, and manner of packing, to evaporated milk.

21. That the only complete and perfect food for infants appears to be mother's milk; that as such it does not appear to have been successfully imitated or a perfect substitute therefor obtained. That whole cow's milk, condensed milk, and evaporated milk, in the order named, appear to be the best substitutes for mother's milk, when substitutes are necessary, but each required to be modified and supplemented to obtain satisfactory results. That skimmed milk is often fed for considerable periods to infants for special dietary reasons. That here does not appear to be any evidence that Hebe was ever fed to infants, except briefly in one or two instances.

22. That the Hebe Co. has in the past, and prior to March, 1920, in its advertising, labels, and otherwise, set forth to the public as a proper use of the compound Hebe its use in cereals and in coffee, aside from its use in cooking and baking and inferentially, though not directly, its use in those particulars as a substitute for milk; but that since March, 1920, omitting "cereals" and since February, 1921, omitting "coffee," the Hebe Co. has, in its advertising, labels, and otherwise, set forth to the public the use of Hebe only in "cooking and baking," has affirmatively on its labels, since March, 1920, directed that it be not used as a

substitute for milk for infants, and has not advertised or held out to the public its use as a substitute for milk, except so far as it may have inferentially done so by prescribing the use of Hebe in its receipts advertised for cooking and baking.

23. That between January, 1918, and September, 1921, there have appeared in Wisconsin newspapers about 340 advertisements by about 54 retail grocers, about one-half of the advertisements being in Superior newspapers and the remainder in Wisconsin Rapids, Green Bay, Madison, and Marinette, in which advertisements Hebe and four other compounds were listed as a "milk" or a "milk compound," or a "compound of milk." That according to Polk's Gazeteer there are grocery, general, market, tea and coffee, and department stores, that ordinarily handle canned goods, to the number of about 8,760 in Wisconsin, of which Superior has 136, Wisconsin Rapids 23, Green Bay 133, Madison 136, and Marinette 59; but not all grocery stores carry compounds.

24. That the Hebe Co. does not appear to have itself advertised Hebe as "milk" or "milk compound," or authorized others so to do, or to have itself advertised in Wisconsin newspapers; but that the Hebe Co. has for several years past advertised extensively nationally through trade papers, magazines, and other journals, and otherwise to the extent of perhaps $250,000 per annum, and has established a good will and business as hereinbefore specified.

25. That there appears to have been shown about 65 instances where retail grocers in Wisconsin have sold Hebe and other compounds as milk or evaporated milk, as follows: In Milwaukee, 17 stores, April 19 and 20, 1921; in Superior, 15 stores, November 8, 9, and 10, 1921; in Madison, 5 stores, April 19 and 20, October 22, and November 28, 1921; in Wausau, 4 stores, November 17, 1921; in Wisconsin Rapids, 1 store, November 16, 1921; in Marshfield, 2 stores, November 17, 1921; in Ellison Bay, 1 store, May, 1921; in Rhinelander, 3 stores, November 10 and 11, 1921; in Poynette, 1 store, November 10, 1921; in Kenosha, 2 stores, April 20, 1921; in Racine, 1 store, April 20, 1921; in West Allis, 3 stores, April 19, 1921; in Green Bay, 6 stores, April 27 and 28, 1921; in Manitowoc, 1 store, April 28, 1921; in La Crosse, 2 stores, April 19, May 10, 1921; in

Spooner, 1 store, November 7, 1921. That there are general, retail grocery stores, market, and tea and coffee stores, according to Polk's Gazetteer; that ordinarily handle canned goods in the cities named as follows: Milwaukee, 2,047; Superior, 136; Madison, 136; Wausau, 78; Wisconsin Rapids, 23; Marshfield, 22; Ellison Bay, 4; Rhinelander, 23; Poynette, 4; Kenosha, 157; Racine, 208; West Allis, 63; Green Bay, 133; Manitowoc, 62; La Crosse, 127; Spooner, 12. That ordinarily the compound is asked for and sold by its trade name "Hebe." That evaporated milks are also ordinarily sold by their trade names.

26. In addition to the foregoing 25 general findings deemed to cover the general situation I find certain isolated facts that may be considered pertinent, being modified excerpts and condensations of findings requested by plaintiffs that may not already sufficiently appear, as follows:

(*a*) That Hebe contains 27.15 per cent of total solids, of which 28.8 per cent is coconut fat, free from free fatty acids in amount about equal to the butter fat extracted from the milk.

(*b*) That Hebe is manufactured under letters patent, is never sold in bulk, and complies with all Federal statutes and regulations.

(*c*) That skimmed milk is a wholesome and nutritious food product, also coconut fat, with a higher caloric value than butter fat, and as easily digested. That coconut fat is used in nut margarine and in the baker's and confectioner's trade. That the nutritional and caloric values of the skimmed milk and of the coconut fat used are retained in Hebe.

(*d*) That the Hebe Co. sells and requests wholesalers and retailers to sell Hebe as a compound of skimmed milk and vegetable fat.

(*e*) That no complaints to the dairy and food department appear to have been made of the sale of Hebe or other compound as evaporated milk. That the sales as hereinbefore found were to employees or connections of the department collecting evidence for use at legislative hearings and at the trial herein; that there was evidence tending to show that the methods employed in such pur-

chases were not always fair to the seller and that the buyer was not misled.

[fol. 553] (*f*) That but three prosecutions have been instituted for the sale of a compound as a milk, each sale being to an inspector. That there is no evidence of any such sale being made to a consumer as such.

(*g*) That condensed milk is advertised and sold in Wisconsin for food for infants. That "Choconilla," a compound of evaporated skimmed milk and cocoa, is permissibly manufactured and sold in Wisconsin, as are sweetened skimmed condensed milk and powdered skimmed milk.

(*h*) That a varied diet such as is used by the American people generally supplies ample vitamines. That the amount of any particular vitamine necessary for proper growth is not known, and that no particular vitamine can properly be called the "growth vitamine."

27. In addition to the foregoing findings I find certain isolated facts that may be considered pertinent, being modified excerpts and condensations of findings requested by the defendant that may not already sufficiently appear, as follows:

(*a*) That all three vitamines are essential to growth and health, and, in addition, experiments with animals indicate that each vitamine has a specific function in preventing a deficiency disease. That entire lack of vitamine A in the diet appears to produce an eye disease known as xerophthalmia; of vitamine B, beriberi or polyneuritis; of vitamine C, scurvy. That the lack of any vitamine appears to cause undernourishment, and, in the young, failure of normal growth.

(*b*) That the Hebe Co. in some of its advertisements, including a recipe book containing about 35 recipes, prescribes the use of Hebe in the recipes wherein standard cookbooks in similar recipes quite commonly prescribe the use of milk.

(*c*) That it is a common custom for retail grocers to place their evaporated milks on the same or neighboring shelves with the various brands separately placed; and Hebe, when handled, usually is likewise so placed with them and other canned goods in the same neighborhood.

(d) That four other compounds of evaporated skimmed milk and coconut oil—"Silver Key," "Majal," "Nutro," and "Enzo"—are manufactured and sold in Wisconsin; and two others—"Carolene" and "Nyko"—manufactured elsewhere, are sold in Wisconsin; that they have different labels with some carrying more or less objectionable advertising thereon.

All of which is respectfully submitted.
Dated January 23, 1922.

A. G. Zimmerman, Referee.

Senator McKinley: The next witness.

Statement of Mr. George Grindrod, Chief Chemist of the Carnation Milk Products Co.

Mr. Grindrod: I have been requested to describe the process of manufacture of this milk compound and compare it with the processes of manufacturing the evaporated milk and the sweetened milk.

Evaporated milk is made from the whole milk. It is first heated to nearly the boiling point in the open, then turned into a vacuum condensing apparatus and boiled down at a temperature of about 133° F. to about 80 per cent of its previous volume. It is then homogenized while it is hot, which reduces the size of the fat globules from about twelve-thousandths of a centimeter down to five-thousandths of a centimeter, or less than half the previous diameter. It is then cooled, standardized in a can, and then sterilized.

Evaporated milk is sterilized under pressure at a temperature high enough to kill everything that is in it, because it is an absolutely sterile product. The temperature used in sterilization is around 240° F., which is sufficient to kill all organisms, much like canned corn, peas, or anything else, except the process must be controlled more accurately because it is a very sensitive product.

The quality of the milk used in making evaporated milk is necessarily restricted. Milk which is not absolutely normal will not stand this sterilization process. This has meant in years past the sorting out of a great deal of milk and the rejecting of milk that would not stand sterilizing. This is still used; but in those districts where condensers have been in existence for many years new standards of sanitation have been adopted by the farmers so they can sell their milk

to the condenseries. That milk which can not go to the condenseries sold to the cheese factories and the creameries.

The evaporated milk requires not only freedom from infective bacteria, but requires, nearly the same degree of purity as certified milk, and requires normality of the cow. A cow with any disease of the milk tract will produce milk which can not be sterilized, so the condensaries have had to carry on a campaign for normal milk.

This same thing applies to milk compound. The milk compound is made from the skimmed milk and vegetable oil. Of the vegetable oil used I want to speak somewhat more at length later on, as it is a matter of considerable importance.

The skimmed is that produced at the condensery, and ordinary skimmed milk is seldom used and would seldom be of a quality that could be used, because it must be strictly normal. The time elapsing from separating to the time when this milk——

Senator Kendrick: May I ask a question there?

Mr. Grindrod: Yes, sir.

Senator Kendrick: Would it involve the necessity of the company using the milk for condensing purposes delivering the skimmed milk to the other company—to the company that is diluting it, as we have been told here, or changing its character?, Would the two companies be interested in the same business, one condensing milk and the other producing this Hebe product?

Mr. Grindrod: Ordinarily that would be the case.

Senator Kendrick: In order that they might have a supply of skimmed milk?

Mr. Grindrod: Of suitable quality.

It would be possible for a creamery which is ordinarily making butter and selling skimmed milk for hog feed to take such care as to develop a milk product which could be used. In the Hebe business we have purchased a few times from ordinary creameries, but we had to sort out the milk very carefully and in some cases we could only use a small percentage of it. We would tell them that from certain places they might ship the skimmed milk to this Hebe plant.

Senator Kendrick: That question of mine seems to have been somewhat involved, but the purpose of it was to determine the source from which this company secured its skimmed milk. Do they get it from creameries or do they

get it from companies that have taken off the butter fat or used a part of it for condensed milk?

Mr. Grindrod: They ordinarily purchase the whole milk of the proper quality, skim it, and make their own butter. The time elapsing from separating to the time when this milk should be heated to sterilize it should only be about one hour.

Senator Kendrick: Then they use the butter fat for making butter instead of making condensed milk?

Mr. Grindrod: That is the situation so far. It would not necessarily be true in all cases. They might purchase from a creamery at some distance if the creamery understood the quality required.

Mr. Miller: May I ask one question right on that point?

Mr. Grindrod: Yes, sir.

Mr. Miller: Is it not a fact that the amount purchased from other creameries of skimmed milk as compared with the total purchases of whole milk is so small as to be negligible?

Mr. Grindrod: It has been heretofore. The purchase of outside skimmed milk has been increasing, however, as these creameries would succeed in producing milk of sufficient cleanliness.

Skimmed milk goes into a forewarming apparatus in which it is emulsified with the liquid fat, which emulsification process is somewhat complicated and is not a simple process. It can be emulsified by direct steam provided the jets are properly arranged in the milk vessel and the milk vessel is of the right size. It can better be emulsified in a special injector emulsifying apparatus where the fat is atomized by high pressure steam and then carried into a second chamber, where the milk is atomized and the two carried together.

In that brief process, whether it is in the body of the milk or in the emulsifying chamber, the fat is subdivided to a very high degree, nearly approaching the fat of cow's milk, and in that state it has the property of collecting the albumin of the skimmed milk in a membrane around each fat globule.

The process is identical with that which takes place in the production of milk in the cow.

The protein which causes the emulsification has to be coagulated or otherwise brought to a certain point of con

centration so as to throw off water from this solution, in which case it will combine with the fat and hold it in permanent suspension. That process takes place in a different way in the secretion of the milk from the cow. So we have [fol. 554] practically a duplication of the condition of the fat in whole milk.

This is then condensed in a vacuum condenser, then homogenized to reduce any enlarged fat globules, then cooled and sterilized in the can. The fat is subdivided globule by globule.

Mr. Jackman: Will you explain what you mean by homogenize? It is rather a technical term.

Mr. Grindrod: The fat in the emulsification is pumped through a valve of special construction which causes the milk to have to pass through between disks of metal, and in order to get through the fat has to flatten out and subdivide itself into minute globules. The globules are reduced from twelve-one-thousandths of a centimeter to about five one-thousandths of a centimeter, or half of the original diameter—the diameter of those in whole milk, and to the same size as in homogenized evaporated milk.

Mr. Jackman: What is the reason for the homogenization?

Mr. Grindrod: That is to separate the fat for long storage and to enable the product to be shipped any distance, to keep the fat in suspension. It has another purpose in that it renders the product more digestible.

Senator Kendrick: I was going to ask the proportionate amounts of different kinds of vegetable oils that are included in the preparation.

Mr. Grindrod: Ordinarily about 4 per cent of the weight of the skimmed milk is emulsified into the milk, or about the same as that existing in whole milk.

Senator Kendrick: Is it altogether coconut oil?

Mr. Grindrod: That has been used mostly heretofore, but other oils are coming into use. I want to speak of that more at length in respect to the purification of the fat.

The production of the fine emulsion has an important bearing upon the digestibility of any compound. The more finely it is emulsified the more completely assimilable it is and the more easily digested.

In making sweetened milk the whole milk is put in an open vessel, heated to about 185° F., and about 20 per cent cane

sugar sirup added, it is then taken into vacuum pans and condensed down about two and one-half to one, or until there is approximately only about 26 per cent of water, the rest being 44 per cent cane sugar and about 28 per cent milk salts, including the fat. That is, if is a little more dense than evaporated milk and 44½ per cent of the water is replaced by cane sugar, leaving only about 26 per cent of water in the product.

This product is then discharged from the vacuum pan and cooled and canned directly. It is never sterilized. It is canned in the open by automatic machinery into open cans and afterwards sealed.

This brings about a great difference not only chemically but bacteriologically between the sweetened milk and the evaporated product.

Sweetened milk is not sterile. Having been heated only to about 185° F., or in that neighborhood, none of the bacteria in the milk are killed, whereas in the evaporated milk all the bacteria are killed. It retains a large number, probably from 10,000 to 20,000 per cubic centimeter, which is a considerable number.

Then, again, it is canned in an open room, and vessel contamination and air contamination get into it. It is a preserved product. In the process of canning and in the handling and storage of it ordinarily considerable bacterial infection takes place.

But in sweetened milk containing 44 per cent of cane sugar there are only about three organisms that can grow if they do get in. One is a mold, another is an air-borne organism, and another is a yeast. Any other organisms caught in it would simply remain in suspension and dormant, never to grow until the milk is diluted. The yeast which frequently gets in sweetened milk and is one of the chief troubles in manufacture is sometimes dangerous. According to newspaper reports, there are known to have been two deaths of children because the yeast opened up a pathogenic wound and produced some disease which killed the children. That was undoubtedly a vessel infection, carelessness in sterilizing utensils.

Recently I wished to find out what the bacterial content of some commercial sweetened milk might be, and secured at random six cans of Borden's milk, which were examined thoroughly for their bacterial content to find out not only what might be growing in them but what was in suspension

in them. Three of these cans contained spore-forming bacteria to the extent of about 4,000 to a gram and the three others did not. In two of the others we found streptococci. Streptococcus is the organism which ordinarily produces inflammation, septic sore throat, and in some cases inflammation of the milk tract, known as mastitis.

How they would get into the milk I do not know, unless some fore-warmed milk was passed on by the fore-warming process.

One can contained as much as a million and a half. Another can contained another organism, the streptotrichosis, which produces lumpy jaw in cattle and also in human beings. It is an extremely infectious disease.

The only way that I could see that that organism could get by in the finished product would be from failure to completely fore warm the milk or the accidental passage of unwarmed milk.

This milk has been given a pasteurized treatment and disease organisms can not grow in it, but they are carried in a dormant state and so maintained, and the public has no way of telling whether the milk contains them or not. The milk does not spoil, so it is possible to transmit diseases in this way and they would ordinarily be unsuspected. The product is somewhat dangerous in that respect and ought to be under more careful supervision in its manufacture.

A similar examination of the milk compound and evaporated milk which is sterile shows no bacterial content whatever; that is, they are safe from the standpoint of bacteriology.

The vitamine content of these products I do not regard as of any direct importance, but the fact seems to be that they all contain considerable quantities of vitamines remaining. They all contain plenty of fat-soluble and water-soluble vitamines and contain some antiscorbutic vitamines at least. I have tested these myself on calves.

Assuming a calf being a natural animal to drink milk, the disease would be more effective than on other animals. I find calves will grow equally well on this compound and on Carnation sterilized milk and on whole milk. There seemed to be no difference, so if there is an extraction of vitamines it is not enough to amount to anything so far as the calf is concerned.

As to the fat used in milk compounds, I wanted to go into that more fully, because it has an important bearing on the industry. The impression seems to be general that the making of this compound is a rather simple process, analogous to making filled cheese and oleomargarine; that anyone may take any kind of fat and mix it with skimmed milk and get a product. It has only been in recent years it has been possible to make it at all, for the reason that no fat had been available to mix in a milk compound. We have only been able to make a suitable compound since 1918. Attempts were made in 1915, 1916, and 1917, but the product was unsatisfactory. At that time the attempt was to secure a pure fat which would be fit to replace butter-fat, and the development of this industry has been dependent upon the art of purifying vegetable fats as a development of the fat-purifying art.

Previous to 1918 there was no vegetable fat available in the country in a state of great purity. In 1918 the refineries at the request of the milk-compound manufacturers succeeded in producing coconut oil in a state of great purity, and it was the first time vegetable fat was made available for human food in a satisfactory state of purity and in a condition in which it could be digested. Previous to that the coconut fat contained aldehydes, compound aldehydes, and creatin, which came from the plant fiber and being somewhat toxic. A great deal of study and application of modern science were necessary to get it out and get the fat in an absolute state of purity.

From 1918 to 1921 coconut oil was the only vegetable fat available for this use. It was not made because it was cheap but because there was absolutely nothing else that could be used. A special grade of it had to be employed and the manufacturers of it had to take special precautions in the selection of their copra and in the process of manufacture. It was also manufactured at the factories manufacturing compounds and the manufacturers advised whether it was of suitable quality, and certain lots of it were rejected.

In 1921 the laboratory of the Carnation Milk Product Co. attempted the use of other oils for that fat, to substitute domestic fats in place of the imported. The danger had been brought to our attention that in the case of a war such as we had had, which might blockade shipments of the coconut oil from foreign ports, we would be cut off from our

supply. England controls the bulk of the coconut oil, so it was to our interest to find a domestic source of oil to be used [fol. 555] in place of the coconut oil and one which could not be cut off by any means.

This year we have succeeded in using peanut oil satisfactorily, and it produces an excellent product. Previous to this, peanut oil and another vegetable oil had been produced in a sufficient state of purity. The oil is not used in its original condition but it is chemically transformed into a butterlike product, which has the same melting point as ordinary butter fat, in order to secure digestability, and is refined of all its organic vegetable constituents which are chiefly the aldehyde compounds.

The peanut oil which we used in 1920 has been very successful, and there is no reason why it could not be used on an enormous scale.

We have also used corn oil and cottonseed oil. They have not been put on a factory scale of production, but laboratory work has shown that they can be used also successfully, and I think the art of oil refining has now been developed to such a stage that practically any vegetable oil can be used as a basis from which to prepare an entirely edible product.

This means the opening up for human consumption of a vast store of fats which has never before been available, and we will not be and never can be in the position that Germany was in of having an insufficient supply of fats. We can produce abundant fat to supply the people. Our production of peanut oil, corn oil, and cottonseed oil is almost unlimited and it can now be refined.

We have been dependent upon the animal fats chiefly in the years past, but the animal fats will never meet the demands of the Nation at the rate it is going. At least, we would reach such a stage that we would have to economize on the use of fats.

A very essential feature of the utilization of fats generally is the necessity for their emulsification. Vegetable fats, no matter how pure, will never be available for human use to any great extent unless they are emulsified. The feeds which constitute fats are emulsified by the cow or by the animal in making the fat in the meat, and these have been the chief sources of food supply for all people.

The pure oil, such as you get from butter fat, is not particularly digestible. If a person should eat the quantity

of oil in a pure state that he eats in the form of an emulsion it would produce sickness. It is an indigestible substance.

Nature has provided for the utilization of fats by their emulsification with proteins. The particular instance is milk, where it is emulsified in casein and in fine particles. If the fat is not emulsified by some means into minute globules it is not assimilable by animal organisms.

We utilize small quantities, particularly of pure fats, by emulsifying with an egg beater and soak them up with the starch in the frying process, which also results in their emulsification to a certain extent in the stomach.

But if you take away the meat supply of fats which are already emulsified and the butter and the cream there would not be very much left in the way of edible fats, no matter how pure they were. If we are going to utilize the great sources of edible fats now available we will have to use something that will emulsify them, and the emulsification will have to be artificial. The subdividing of a fat as required for digestion requires an immense amount of power, mechanical or chemical. We can get a pretty good emulsification by steam at 125 pounds pressure to the square inch in the process used in making Hebe, but it is not complete. It takes a very powerful machine to finish the subdivision. The cow produces it by chemical force in her milk.

The housewife can not produce it by the use of the egg beater because she has not the power. It takes about a 25 horsepower motor to subdivide fat. It takes a pressure of about 3,000 pounds to the square inch to cause it to subdivide. Our only means of ever utilizing fats will be to utilize the bacteria for emulsification.

Now, again, we have to consider the source of an emulsifying agent. No fat can be emulsified except by a soluble protein. It can not be emulsified in anything else and be made edible. A soluble starch might be emulsified but would not be a suitable edible compound for general use. Nature generally prepares fats for use by means of soluble proteins in the milk and in the meat. The only great source the Nation has of soluble proteins is skimmed milk. We do get white of egg, but there is not enough of it and it is pretty nearly impossible to make it keep. We have plenty of skimmed milk and that is the logical thing to use for emulsifying fat. If we use skimmed milk in emulsifying these fats we are sure of an auxiliary supply of

cooking fat and edible emulsion that never can be exhausted. We can always raise enough peanuts, corn, and cotton to prevent our being starved for want of fats, or we can import coconut oil as long as that seems practicable.

In summarizing this proposition I will point out the fact that sweetened milk is a product which ought to be subjected to better supervision in its manufacture, particularly if it is going to be sold or used for infant feeding. It constitutes a menace on account of its poor composition, but its probability of carrying unrecognized diseases is a thing which ought to have proper attention. It has not had attention from manufacturers, but I think it will have in the near future. At least processes are under way now which will insure sterile sweetened milk.

The utilization of the milk compounds, as I see it, is primarily a means of utilizing a valuable source of edible fat, not particularly the skimmed milk, although that is important. We know we can get the skimmed milk, but we can not get the vegetable fats without we have the skimmed milk. That is about the substance of the whole situation.

Mr. Jackman: Could I call your attention to one or two things, Mr. Grindrod, that I think you have omitted?

Mr. Grindrod: Certainly.

Mr. Jackman: First, these nut margarines; what do they consist of?

Mr. Grindrod: Nut margarines ordinarily consist of from 80 to 83 per cent of a vegetable oil which is mulsified by means of 15 or 20 per cent of skimmed milk, skimmed milk again being the emulsifying agent.

Mr. Jackman: That vegetable oil is coconut oil?

Mr. Grindrod: It has been largely coconut oil, although peanut oil, cottonseed oil, and corn oil have been used a good deal.

Mr. Jackman: There was some statement made by some one in favor of this bill the other day with reference to the manner in which copra was prepared. What is the fact in the refining process as to whether the coconut oil used in the compound is rendered sterile or not?

Mr. Grindrod: Coconut oil is absolutely sterile; it is also clean and free of everything except the pure fat.

Mr. Jackman: This sweetened condensed milk which you analyzed and found these spores in and matters in suspension, what brand of milk was that?

Mr. Grindrod: That was Borden's.

Mr. Jackman: Eagle Brand?

Mr. Grindrod: Eagle Brand milk.

Mr. Jackman: I noticed in a question which Senator Kendrick asked you—or I gathered from what he said that he had the idea that in the manufacture of evaporated milk you took out the butter fat?

Mr. Grindrod: No.

Mr. Jackman: You use the whole milk, do you not?

Mr. Grindrod: Yes.

Mr. Jackman: And just take out some of the water content?

Mr. Grindrod: Yes.

Senator Kendrick: Yes; the witness cleared that up pretty well. I did not understand at first the source from which this product was derived, whether or not it is necessary to have the two products; that is, the condensed milk and then use the skimmed milk or this other product, or whether they had, acting independently, bought skimmed milk and used it in connection with the product of this Hebe, and that seems to be what he says, that they bought their skimmed milk from creameries or the whole milk and took out the butter fat and used that for butter.

Mr. Jackman: The whole milk is bought right from the farmer and delivered to them just the same as it is delivered to the condenseries.

Senator Kendrick: That is, the greater proportion of it is bought that way?

Mr. Jackman: Yes.

Senator Kendrick: That is the way I finally understood it.

Mr. Jackman: Have you made any analyses and then had a check made of those analyses of a preparation of skimmed milk and cocoa put out by the Borden Co.?

Mr. Grindrod: Yes; I have examined some of that product.

Mr. Jackman: Have you those analyses with you?

Mr. Grindrod: Yes.

Mr. Jackman: Will you tell the committee just what that product is?

Mr. Grindrod: It is a product known as Borden's chocolate flavored malted milk, which I believe as labeled consists of Borden's malted milk, together with butter, skimmed milk, cocoa, and sugar.

[fol. 556] Mr. Jackman: Is this the product?

Mr. Grindrod: That is the label; yes. That product contains 3.8 per cent fat, 1.35 per cent moisture, 19 per cent cane sugar, 39 per cent malto, no starch. The essentials of that analysis are the low fat content, 3.8 per cent.

The product is said to contain cocoa and does contain cocoa. Cocoa contains about 30 per cent of the chocolate fat.

The addition of cocoa to that product would mean, then, adding 30 per cent of whatever amount of cocoa is used as fat. The remainder would be the constituents of chocolate.

The low fat content, 3.8 per cent, means that the product is made from skimmed milk and contains cocoa. A malted milk must contain 7.5 per cent of butter fat. The addition of cocoa to a malted milk would result in a higher fat content than 7.5 per cent, whereas this product has a much lower fat content.

The absence of starch from the product indicates that it is a product made by adding malt extract to skimmed milk, cocoa, and sugar, allowing them to react, drying and canning.

That product could not be a mixture of proteins malted milk or cocoa, sugar, and skimmed milk. That is, there is no such thing in it as malted milk.

So I would consider it to be incorrectly labeled in that it states that it is made of malted milk, because it does not contain any.

Mr. Jackman: Have you had your analysis checked up by some other laboratories?

Mr. Grindrod: Yes; a commercial laboratory gave an analysis and gave approximately the same result.

Mr. Jackman: What is that laboratory?

Mr. Grindrod: The Miner Laboratories, of Chicago.

Mr. Jackman: Read the address into the record.

Mr. Grindrod: Nine South Clifton Street, Chicago.

Mr. Jackman: I would like to offer into the record at this time these advertisements, with a picture of the baby and a statement in there that it is for children—build the health and strength of your children on this product—put out by the Borden Co.

(The advertisement so offered reads as follows:)

The Goodness of Milk—With Something Besides

Milk is nature's ready made food—you can hardly drink too much of it, whether you are Big Bill or Tiny Tim.

Malted milk is even more nourishing than plain milk. It has added healthful, strengthening qualities. And chocolate malted milk, made by Borden, is better yet, because it has the delightful chocolate flavor already mixed in it.

For children who always must have something between meals it just satisfies their momentary craving without spoiling their appetites for regular meals. For grown people it is a healthful food-drink for the times when they need a bit of nourishment. And taken hot, just at bedtime, it sends you off to sleep for a refreshing night's rest.

Borden's Chocolate Malted Milk—It Is Something New

Malted milk ready flavored with chocolate. No mixing, no inconvenience. Just add water or milk—hot or cold—and there you are—with a food-drink, just like that served to you at the soda fountain.

Chocolate flavored malted milk is at your grocer's or druggist's and it is made by Borden's, which insures its quality.

THE BORDEN CO.,
Borden Building, New York.

Mr. Jackman: This does not resemble in color milk, does it?

Mr. Grindrod: No; it has sufficient cocoa to give it a color.

Mr. Miller: I understood you to say that you are the chemist for the Carnation Milk Products Co.?

Mr. Grindrod: Yes.

Mr. Miller: And the Carnation Milk Products Co. is the owner of the Hebe Co.?

Mr. Grindrod: Yes.

Mr. Miller: And you are, of course, very familiar, then, with the process of manufacture of Hebe and of what it is made?

Mr. Grindrod: Yes.

Mr. Miller: Will you state to the committee to what extent, if at all, bicarbonate of soda is used in this preparation.

Mr. Grindrod: Bicarbonate of soda is used in making most evaporated milk compounds. The extent of the use is in extreme cases about 1 part in 5,900.

Mr. Miller: And to what extent, if at all, is buttermilk used in the composition of Hebe?

Mr. Grindrod: Buttermilk is used to the extent to which it occurs; that is, the whole milk is taken, skimmed, and if made into butter the cream is turned sweet—that is, without souring, it is turned immediately; then this sweet buttermilk, which is chemically the same as skimmed milk, is turned into the skimmed milk the same as that which comes from the separator, so if the factory is not selling any cream and is making butter all of the buttermilk from the cream is turned back with the skimmed milk and goes into the product.

Mr. Miller: Would it be a correct label for Hebe to label it as a composition of skimmed milk, buttermilk, vegetable fat, and bicarbonate of soda? Would that be an accurate label?

Mr. Grindrod: No; it would not be correct as far as the bicarbonate of soda is concerned.

Mr. Miller: Why?

Mr. Grindrod: Because there is no bicarbonate of soda in the finished product.

Mr. Miller: In the use of the bicarbonate of soda its purpose is to neutralize acidity, is it?

Mr. Grindrod: Yes.

Mr. Miller: That does not remove the cause of the acidity, namely, undue fermentation, but simply neutralizes its effect. Am I right in that?

Mr. Grindrod: No; I do not think that would be correct.

Mr. Miller: Does it remove the causes of the acidity?

Mr. Grindrod: It does. The cause of the acidity would be the lactic acid present, and it removes that.

Mr. Miller: And is it not simply a neutralizer of the acidity? Would you go that far?

Mr. Grindrod: Well, it is correct to say it is a neutralizer of acidity; that is correct.

Mr. Miller: That is all.

Mr. Jackman: In the manufacture of evaporated milk what is the fact as to whether bicarbonate of soda, which, as I understand, is ordinary baking soda—is it not?

Mr. Grindrod: Yes.

Mr. Jackman: Is used?

Mr. Grindrod: It is used the same in evaporated milk as in Hebe; no difference.

Mr. Jackman: Is it used at all seasons of the year, or only at certain times of the year?

Mr. Grindrod: Only at certain times of the year; ordinarily in the summer time.

Mr. Jackman: And the reason for that is because of the heat it will take in sterilization?

Mr. Grindrod: That is the reason for using it. And the addition of bicarbonate of soda in the milk does not result in anything being added to the finished product, because it is completely transformed into sodium dioxide, lactein and water, and the function is to change the free hydrogen content during the period of sterilization. The acidity of the finished milk as it comes in the cans after sterilization is exactly the same as before it went in and before the bicarbonate of soda was used. That may seem somewhat strange, but it is a fact and I could explain the reasons for it fully if it was a matter of any interest.

Mr. Jackman: How much bicarbonate of soda is put in evaporated milk or compounds?

Mr. Grindrod: Where it is used, the quantity is about one in five thousand.

Mr. Jackman: You spoke about buttermilk. Is that the ordinary commercial buttermilk, or sweet milk?

Mr. Grindrod: That would not be the ordinary commercial buttermilk. It is called buttermilk because it comes from butter.

[fol. 557] Mr. Jackman: What is the difference between that sweet buttermilk and ordinary skimmed milk?

Mr. Grindrod: No difference chemically so far as I know. They are identical.

Senator McKinley: Mr. Bryan?

Mr. Bryan: No questions.

Senator McKinley: We will adjourn now until 2 o'clock.

(Whereupon at 12 o'clock noon the committee took a recess until 2 o'clock p. m.)

After Recess

The committee reconvened, pursuant to the taking of recess, at 2 o'clock p. m.

Senator McKinley: The committee will come to order.

Mr. Jackman: When we adjourned this case, Mr. Chairman, I spoke with Doctor McCollum, who said he desired to go to New York, and if satisfactory to the committee

we will ask him now such questions as we desire to ask instead of later on, so as to accommodate him.

Senator McKinley: Certainly.

Further Statement of Dr. E. V. M'Collum

Doctor McCollum: I would like to ask permission, if I may, and I believe for all concerned it would be better if I could have permission to, so far as I can in the course of a few minutes, comment on what evidence has been presented here, in order that the cross-questioning may bring the subject out in a less fragmentary way than I believe would otherwise be the inevitable result.

Senator McKinley: I think that would be all right.

Senator Ladd: I think he should have permission to go right ahead in his own way, and after that they can ask him questions.

Senator McKinley: All right.

Doctor McCollum: There are a number of points I must take up. One of these pertains to the character of the testimony which has been presented here. We all admit that much conflicting testimony has been given by persons who posed as experts in their respective fields. This demands a word of explanation.

It has been stated here that certain investigators are unable to duplicate the results of others or to duplicate their own experiments. Doctor Carlson, I believe, brought that out.

Doctor Funk suggested that there was a great difference in the results that one gets in his own laboratory, and similar differences between investigators. Now, obviously, when there is a failure to repeat experimental work and get the same result in a series of experiments, one of two things is wrong. Either the results of the first experimenter are unsound, and, therefore, those who do the work in a better way, with a better technique, fail to duplicate because of the unsoundness of the first investigator's data, or the second investigator who attempts to duplicate has not the proper technique. It must be one of the two things.

I want to emphasize it here as my belief that much of the confusion that exists in the experimental data which is recorded is the result of poor technique, failure to understand what are the necessary things to be observed in order to get satisfactory results.

Just to give you one illustration, I believe it was Doctor Carlson who pointed out that he could not duplicate results; that animals behave very differently; that some would develop an ophtalmia whereas others never would. That is fallacious. If the experimental work is properly conducted one never fails to duplicate results.

Doctor Carlson, I think, made a suggestion which is in reality the explanation for his failure to duplicate results. He pointed out this, that it was very necessary to purify casein that was used as a pure protein by repeated extraction with alcohol and ether in order to free it from vitamines. Now, just let me for a moment present this bit of discussion primarily to Doctor Ladd, because he is a chemist and he will see the point of view perhaps better than anyone who is not a chemist.

When we prepare casein from milk, precipitated in a crude form, it carries down with it more or less of the other components of milk. Let that casein dry (as commercial casein is dried), and let it be dry, and in this form we start ~~in~~ in the laboratory to purify it. Now, dry casein, commercial casein, is about as hard and is of much the same nature as horn. It is an insoluble and a very difficult substance to grind. It is insoluble in alcohol, it is insoluble in ether. It is extremely difficult to grind casein to a very fine state, and when we grind it to a moderate state of fineness to what extent do we purify such casein by extracting it by two solvents neither of which dissolve it in any appreciable degree? Nor do they penetrate the kernel of that casein.

Years ago I described the method I used in purifying casein for a number of years, and they use it in Wisconsin. Doctor Goldberg is using it now in casein that he intends to use in experimental work. It does not involve extraction with either alcohol or ether.

I want to go on record here as saying that the method of so-called purification of casein as a pure protein this is a prominent feature of nearly all laboratories doing nutrition work—the method they use of extracting with alcohol and ether is not a purification of that casein which is at all effective in removing those vitamines or inorganic elements, whichever they may be, within the kernel of casein.

One other point I ought to bring up somewhat early in this testimony. Some one referred to the fact we have

had a vitamine hysteria. I grant it. There is now in the public mind, and perhaps in the minds of professional chemists and physicians, a vitamine hysteria, but I want also to say that I believe I am one of the last ones that could be accused of overemphasizing the importance of vitamines in nutrition. Anyone who has read my writings will grant that the objective which I have always held in discussing diets, either in my technial papers or in popular writings for the public, has been to point to a system of diet, a system of selecting food, which would prove satisfactory in producing optimum or nearly optimum nutrition.

I believe it was on June 24 in the journal of the medical association I published a paper in which I have attacked with some energy the whole institution of marketing commercial preparations said to be concentrated preparations of vitamines. I am now threatened last week with dire consequences for the publication of that paper unless I will retract. I anticipate that I will be prosecuted for damages to the business of those whose preparations I have exposed. I believe this should go on record here because it is an indication of conservatism rather than obsession with an idea of placing in a paramount position in the human mind the importance of vitamines in nutrition.

I was the first one in this country or any other to formulate, in 1916, a working hypothesis as to what substances were essential in a diet. That working hypothesis has been the basis of interpretation by the investigators since that time.

I have myself emphasized more than anyone else the importance of the quality and the proper adjustment of inorganic elements in a diet, as well as carrying on my investigations on vitamines. I can not be rightly charged with having but a single viewpoint and a narrow viewpoint.

A word about value, the relative values of the testimony of professional medical men or clinicians as compared with laboratory workers. I think that is a question that deserves a few words of comment here.

Before legislative committees and in the courts I have been confronted on a number of occasions with the assertion that this question of food values in so far as they relate to human nutrition should be left solely to the clinician.

Clinical observations are always of such a nature that their interpretation is open to some question. Our system of ethics does not permit of the conduct of rigid experiments on human beings. That is quite right. The history of progress in medicines is not the history of discoveries made by clinicians. There have been relatively few additions to the sum of human knowledge by clinicians, yet the clinician has always belittled the laboratory man.

Take the great observations of Pasteur. He was a chemist; he was not a physician. He was a founder of the modern science of bacteriology. The physicians of Paris laughed him to scorn when he announced some of his most important discoveries. They said, "He is a chemist; he is a laboratory worker. We with clinical experience know better than he."

Take the question of antiseptics. Lister was a great-minded physician and surgeon, and he was the first to attempt to apply in surgery the principles of antiseptic surgery as suggested by the work of Pasteur, but a long period of years had elapsed before the ideas of Lister were accepted by clinicians.

Take the question of puerperal injections. There have been millions of women infected in childbirth by the dirty finger of the clinician, because he could not learn through clinical experience to wash his hands. Oliver Wendel[fol. 558] Holmes was the first physician to call attention to that in the light of laboratory experiments and bacteriology.

I will mention no other cases. These are enough illustrations to establish what has been and is the attitude of the clinicians toward laboratory men. Chemistry and bacteriology have in the main made medical science what it is. Conservatism is a good thing, and I will pause here to say I am not decrying in any sense the clinician. He is a very useful member of our society; we could not dispense with him. I have the greatest respect for him and his conservatism, but when we are considering a question like this I must insist that the viewpoint of the clinician is not to be put above that of the laboratory investigator without very careful consideration as to the relative merits as they appear to common, sane judgment regarding the merits of the two sides presented.

Just another illustration. Doctor Brennemann discussed the question of rickets. He said that I thought I

knew the cause of rickets. He questioned whether I did know the cause. But Doctor Brennemann said words to this effect, that children get rickets no matter how they are fed. Nursed children get rickets, children fed cow's milk get rickets, children fed modified milk get rickets. He did not tell us the cause of rickets, nor did he tell us any effective means of preventing that disease in children.

Doctor Brennemann did point out a very important thing to consider on this occasion, namely, the great prevalence of that disease. Nearly all colored people have it; a very large percentage of white children have it. Clinicians are all agreed that this is so.

Now, when we examine the data of the public-health service, the data collected by the child health organizations in New York, the data collected by various agencies such as that operated by Dr. William R. P. Emerson, an eminent student of child nutrition, we must admit that the evidence is overwhelming that as a nation we are physically below par and that it is a developmental difficulty, that something is wrong. Who is telling us what is wrong? The clinician? They have not done it yet.

Clinicians have come here and condemned the feeding of canned milk to infants, but do we see any widespread campaign for the education of mothers in this country not to feed infants on canned milk?

I condemn canned milk. I have repeatedly condemned it as an infant food, not on any extensive experiments or observations of my own, but on the basis of human experience, in consultation with various clinical observers.

What I want to emphasize next is that this Voigt bill which we are considering does not rest, as was asserted here, on incomplete and inadequate experiments. It rests upon two things. It rests upon the information which we have from the laboratory and it rests upon common human experience as to what is going on in the development of children and in the preservation of vitality in adults.

We are a nation below par. I need only mention the condition of the teeth of the people of this country and of Europe. They are indescribably bad. When we ask why, no one tells us why.

I have just begun the publication of a series of papers on experimental work which shows that you can make good teeth or you can make poor teeth in animals. You can by

the selection of our ordinary foods make mistakes serious enough to interfere with the development of the teeth so that when they are finished they have no barriers of defense within themselves, or you can make a good set of teeth in early life and then destroy those teeth by setting up such conditions as lead to the resolution and the dissolution from within, not from without, necessarily, of the tooth substance.

These matters are sufficient to point to this conclusion: That we need to do better than we are now doing in the development of children, in the nutrition of adults, so as to maintain such vitality as they reach adult life with.

Doctor Carlson stated here that he knew of no authentic cases of xerophthalmia in man. I can point to the work, now world famous, of Doctor Bloch, of Copenhagen, and Doctor Mori, in Japan, whose experiments have been of record for many years in medical literature.

I had with me in Baltimore for a year an ophthalmologist of extraordinary capacity, another Doctor Mori, now the physician of the South Manchurian Railway, and his corporation, the South Manuchurian Railway, sent him to America to study in my laboratory for a year this disease, which is such a problem in human health.

The next phase I would like to discuss is this: What do you mean by normal development? The clinician comes before us and talks about normal and sick babies. I want to assert that the word "normal" in human nutrition has been very much abused and very much misunderstood. Normal, as we ordinarily use it, is a term that signifies nothing but a sort of cross sectional view of the average standard or quality of human material. We should look toward the optimum development rather than accept what we are accustomed to say is the normal. When we view things in this light there is a tremendous opportunity for improvement in human material.

Now, how are we going to effect that improvement? We must open our eyes to the problem of human nutrition in the same way that science has led to the viewing of the subject of animal nutrition on farms. We no longer feed our animals just anything. By experience entirely divorced from the sentimental factors such as enter into human problems we have learned what constitutes successful practice.

If what I say is true—that as a nation we are of rather poor quality in human material—there is a cause for that. If that is a developmental factor, then the cause is failure to develop satisfactorily.

What is the most important problem in animal development or in human development?

I think everyone familiar with the facts even in a most general way must admit that the furnishing of a properly constituted diet is the most fundamental of all factors in inducing satisfactory nutrition. If that is the case then we need to look very carefully into the dietary habits and practices to which we are now addicted.

I will not attempt to take up the time of this committee by going over again the statements which I have already made relative to the selection of food and the system of diet which I have been trying to promote for several years, which will, if we can get it adopted, produce the results which we desire, namely, a very great improvement in the developmental processes of children.

The economist—I can not recall his name for the moment—who spoke here this morning pointed out that the consumption of butter in this country at the present time only amounts to the insignificant figure of 14 pounds per person per year. I might call attention in passing just to confirm—not on my own assertion, but to confirm from the observations of others, the serious situation which exists in the nutrition of children in this country—I might call attention to the quotation from Doctor Marriott, of St. Louis, which was read here yesterday, which described the present practice of the feeding of infants and young children as one of the blackest failures in our present history in the Nation. I am only very roughly paraphrasing, but that is the gist of his statement.

I was impressed this morning with the statement of the same gentleman, the economist, who asserted that business will either stand or fall on the honesty of its advertising. We have not in the past relied upon those principles in the matter of safeguarding the general population. We have seen for years and years—it is nearly over now, but we have for a long period of years seen a great campaign of prosecutions, of education, and of legislation which constituted the movement toward the securing of pure food laws in this country. Senator Ladd is one of the prominent

figures who for years was engaged in putting across this great movement for pure foods in this country, the prevention of adulteration, the prevention of manipulation, and of the treatment which would cause deterioration of food.

I am impressed, as I have sat in this committee and listened to the evidence which has been presented here, that we are to-day, and yesterday, and the day before that have been reenacting in principle one of the things which was so common in the days of the fight for pure food legislation.

Now, the crux of the whole situation we will put before you is this, and then I think I have done: Our common diet as a Nation is a diet of bread made from bolted flour, of meats, mostly of the muscle cuts, potatoes, and sugar. We eat small amounts of other things, but we do not eat enough of certain ones to make good the deficiencies of that kind of a diet.

Now, our national diet, if rigidly adhered to in its extreme form, the substances which I have enumerated, is a failure, a complete failure, in animal nutrition. No one has attempted to deny that. I believe everyone who has experimented at all in this direction admits the justice of that assertion.

[fol. 559] If this is the case it is quite sufficient to account for poor physical development which we see, which Doctor Brennemann has pointed out, the tendency to skeleton defects. I pointed to the universality of two defects. We have the general tendency to underweight, anemia, lassitude, fatigue in school children, which is another added fact pertinent to this question.

Now, the problem, as I see it, is to modify this diet by the addition to it, or the inclusion in it would be better, of certain foods which I call the protective foods, because they should be something of unique value in that they are so constituted as to correct the faults of anything else we are likely to eat in the way of bread, potatoes, and sugar.

Now, the chief one of these protective foods, from our point of view (because we can take it without disturbing established dietary habits) is the introduction of greater amounts of milk into our diet.

The second thing of importance, and I have repeatedly emphasized this for years, is to borrow the best feature of the oriental type of diet—a variety of leafy vegetables; not

roots, not seeds, but the leafy vegetables which enter into our diet.

The proposition which I have presented is sound. Everyone who has either observed human beings on different types of diet, or who has studied the results of feeding different kinds of diets to laboratory animals, must admit it is sound. This proposition is sound. Now, if it is sound, if we are to introduce into the human diet greater and greater amounts of dairy products, of milk and its products, are we going to supinely permit the substitution of the most important one of the protective foods by something which looks like it, which is put up in packages which resemble a form in which milk is marketed in large amounts? Are we going to have such a product, which is sold in close imitation of milk, put into the home as a substitute for something which if purchased and taken in the proper amounts would be decidedly superior to it in quality, which would enhance in a greater degree the average home diet than would so much of the filled milks which are manufactured and sold and promoted for sale in lieu of milk?

I think I will stop here and leave the rest of the discussion to be brought out as I am cross-questioned.

Mr. Jackman: You spoke, Doctor, with reference to clinicians. If you get a certain result in the laboratory from an animal, such as a rat, in order to determine whether that result would follow in a human being, there should be clinical experience and observation to confirm the result of the experiment on the animal?

Doctor McCollum: Yes, sir.

Mr. Jackman: I think you and I do not disagree on that subject.

Doctor McCollum: We do not disagree on that; no, sir.

Mr. Jackman: I am going to put these questions, Doctor, as you and I have been together before and I do not think there is a great deal of disagreement, in some ways, between us.

As I understand your position from reading your works, leaving out the question of the vitamine itself, in order to have an optimum growth, I think you call it, you should have in the food which you take in the proper proportions proteins, carbohydrates, mineral salts, and fat, with the possible exception that you may substitute in the animal the carbohydrate for the fat?

Doctor McCollum: Yes; in some degree.

Mr. Jackman: And that if you have a lack of any of these essential elements in an animal you get malnutrition?

Doctor McCollum: Yes, sir.

Mr. Jackman: For example, if you fed to a rat purified rations and gave him fat soluble A and did not give that rat mineral salts, you would get disastrous results?

Doctor McCollum: Yes, sir.

Mr. Jackman: And the same follows if he does not get the protein?

Doctor McCollum: Right.

Mr. Jackman: And that follows out on these other different component parts of the diet which I have just spoken about?

Doctor McCollum: It does.

Mr. Jackman: Now, this vitamine theory, as I understood you to state, was rather of a comparatively recent development. I think you enunciated the doctrine with reference to your hypothesis on vitamine A somewhere along in 1915?

Doctor McCollum: The first observation was published in June, 1913.

Mr. Jackman: The first observation where the word "vitamine" was used was some observation by Funk with reference to beriberi, was it not?

Doctor McCollum: In 1911; yes.

Mr. Jackman: Now, the vitamine has never been chemically separated as a substance, has it?

Doctor McCollum: None of them have.

Mr. Jackman: None of them have?

Doctor McCollum: Doctor Funk believed some years ago—I do not know what view he holds now—that he had isolated one, but the discussions in the publications since that time would indicate that neither he nor others accept the view that one has been isolated.

Mr. Jackman: Therefore chemically its composition is not known or to just what group it belongs so far as its chemical properties are concerned, if any.

Doctor McCollum: We know nothing about the chemical nature of any of them.

Mr. Jackman: And to determine whether or not a certain food has any vitamines you must determine that, as I understand it, by the effect which the feeding of certain diets deficient in these so-called vitamines has upon animals.

Doctor McCollum: That is the only way we have, sir.

Mr. Jackman: There have been considerable changes; for example, as I understand it you enunciated a doctrine that scurvy was not due to a vitamine at one time and then changed?

Doctor McCollum: At one time Doctor Hess and I almost simultaneously held the view the trouble in Canada was not a deficiency disease in the vitamine sense.

Mr. Jackman: Bacteriological development the same way?

Doctor McCollum: Yes. I may add, however, that I have long since abandoned that view and so stated in my recent book.

Mr. Jackman: That is my understanding of your recent book.

Doctor McCollum: Yes.

Mr. Jackman: I understand you to say also that the most prominent component of the body tissues, the skeleton excepted, is protein.

Doctor McCollum: Yes.

Mr. Jackman: And that the nutritive value of a protein depends upon the number and amounts of the animoacids it yields on artificial hydrolysis or on digestion.

Doctor McCollum: Yes.

Mr. Jackman: Are those animoacids connected in some way with the protein?

Doctor McCollum: They are component parts of the proteins.

Mr. Jackman: And they are found in skimmed milk?

Doctor McCollum: They are.

Mr. Jackman: And to the same extent, are they not, as are found in the whole milk before the butter fat has been extracted?

Doctor McCollum: They are essentially the same.

Mr. Jackman: There is not, is there, Doctor, as I understand your discussion, any one natural food which combines at all times all of the necessary elements to insure an optimum growth?

Doctor McCollum: There are such foods; but not suitable for human consumption over a long period.

Mr. Jackman: That is what I mean.

Doctor McCollum: The grazing animals, for example, live indefinitely for successive generations on a single plant provided they have abundance of the leaf to eat.

Mr. Jackman: In other words, to a layman, it is necessary to supplement one food with another?

Doctor McCollum: Yes.

Mr. Jackman: Taking those elements which are good in one food—for example, you take Pillsbury's or Gold Medal Flour, that does not contain any vitamines?

Doctor McCollum: Yes.

Mr. Jackman: If you supplement that with tomato juice you get all of the vitamines?

Doctor McCollum: Yes.

Mr. Jackman: A, B, and C?

Doctor McCollum: Yes, sir.

Mr. Jackman: Leaving out D, now, for the time being?

Doctor McCollum: Yes.

[fol. 560] Mr. Jackman: And if you take potatoes you have got to supplement them?

Doctor McCollum: Yes.

Mr. Jackman: They do not contain A, do they?

Doctor McCollum: At least not in demonstrable amounts.

Mr. Jackman: I mean the boiled potato or mashed potato?

Doctor McCollum: No.

Mr. Jackman: On the other hand, they do contain very valuable food essentials?

Doctor McCollum: Yes, sir.

Mr. Jackman: Such as starch, and they do contain some of the vitamine B?

Doctor McCollum: Yes, sir.

Mr. Jackman: Breakfast foods, like Quaker Oats, contain no vitamines of any kind?

Doctor McCollum: I would not say that; no. Quaker Oats certainly contains the vitamine B in moderate amounts. All cereal products contain a certain amount of them.

Mr. Jackman: There is no A or C in it, is there?

Doctor McCollum: No demonstrable amount of either of those; no.

Mr. Jackman: Are you familiar with the recent announcement that has been made by one of the bureaus of the Department of Agriculture here to the effect that meats have been found to contain vitamine A?

Doctor McCollum: Which meats?

Mr. Jackman: Well, pork, for example?

Doctor McCollum: Yes; I have seen that assertion?

Mr. Jackman: Do you agree with it?

Doctor McCollum: No; to this extent, that those cuts of meat derived from muscles are very poor sources of any vitamines.

Mr. Jackman: For instance, if you take an ordinary porterhouse such as we get, that is devoid of vitamine, but very rich in protein?

Doctor McCollum: Yes, sir.

Mr. Jackman: Now, up until the time you made your recent announcement there were, as I understand it, generally accepted three vitamines?

Doctor McCollum: Yes, sir.

Mr. Jackman: Which, I think, have been designated as fat soluble A, water soluble B, and water soluble C?

Doctor McCollum: That is right.

Mr. Jackman: Those, I think, you say all occur in milk?

Doctor McCollum: They do, yes; that is, in fresh milk.

Mr. Jackman: In fresh cow's milk, the way we get it from the cow on the farm?

Doctor McCollum: Yes.

Mr. Jackman: The amount of the vitamine which is contained in the milk will vary from the same cow, will it not?

Doctor McCollum: According to the character of her feed. If she is long continued on one kind of diet, it might differ from that derived from another kind of diet.

Mr. Jackman: For example, I think you said that the skimmed milk of a cow in June might contain as much or more vitamine A than the whole milk of a cow in December—a winter-fed cow?

Doctor McCollum: I never said that on my own authority, but others have said it and I accept it.

Mr. Jackman: Oh, yes. So that whether the milk of a nursing mother contains vitamine A in sufficient degree for the development of the child is primarily dependent upon the diet which the mother gets.

Doctor McCollum: That is the reason why we should be very solicitous of the character of her food supply.

Mr. Jackman: You have seen, I think, cases where children have developed rickets, breast fed, have you not?

Doctor McCollum: Yes, sir.

Mr. Jackman: And there are reported cases—I do not remember whether you have seen them or not—where children fed on cow's milk have developed rickets?

Doctor McCollum: I have seen a good many such cases.

Mr. Jackman: So that it has become the almost universal practice in the feeding of infants at a very early age to supplement the diet of milk, either mother's milk or cow's milk, with orange juice or tomato juice or something of that character?

Doctor McCollum: That is specifically for the prevention of scurvy.

Mr. Jackman: But that is the ordinary method, is it not?

Doctor McCollum: That is a common practice now.

Mr. Jackman: Mellanby, in England, as I understand it, has announced that orange juice contains vitamine A.

Doctor McCollum: It contains a small amount. I agree to that from personal experience. It contains a small amount.

Mr. Jackman: Do you remember Doctor Hart, of the University of Wisconsin Experimental Station, making the statement that he cured a dog which had this disease you call xerophthalmia, which had been induced by defective diet, by the simple administration of orange juice?

Doctor McCollum: I remember something to that effect.

Mr. Jackman: Have you had that experience?

Doctor McCollum: Not with a dog.

Mr. Jackman: Have you with rats or other experimental animals?

Doctor McCollum: We have some experimental data with a rat on that point, namely, that one can long prevent the development of that disease by giving liberal amounts of orange juice.

Mr. Jackman: Now, these experimental data which have been compiled—in those you use the rat as an experimental animal largely, do you not?

Doctor McCollum: Largely; yes.

Mr. Jackman: And the rat is quite susceptible to lack of vitamine A, as I understand it?

Doctor McCollum: It is; yes.

Mr. Jackman: That is due, as I understand your explanation, to the fact that the rat's life span of approximately 3 years is said to be comparable to a man at the age of 90.

Doctor McCollum: Approximately.

Mr. Jackman: So that 1 day in a rat approximates 30 days in a human being?

Doctor McCollum: About that; yes.

Mr. Jackman: And that is the reason, as I understand it, why you get results in the rats very much quicker than you would otherwise?

Doctor McCollum: I think that principle is sound.

Mr. Jackman: If you skim milk, you do not take out all the butter fat, do you?

Doctor McCollum: No.

Mr. Jackman: And I understand you in your recent work to state that your observation and previous statement to the effect that vitamine A in milk was contained approximately 50 per cent in the butter fat and 50 per cent in the other portion of the milk has been since confirmed by Hopkins?

Doctor McCollum: Doctor Hopkins did not put it in so exact language. What Doctor Hopkins said, if I remember correctly, was that there was more of the vitamine A in the nonfat portion of the milk than could be accounted for on its fat content—that is, skimmed milk.

Mr. Jackman: I understood you in your recent book—see if I am mistaken because I do not desire to misquote you in the slightest degree—that your judgment from your experience is that it is about 50-50.

Dr. McCollum: That observation has pursued me now for some years relentlessly. I may explain at this time that that observation was put into the Journal of Biological Chemistry quite a number of years ago. At that time our technique for estimating quantitatively—and we only do it roughly even now—was decidedly less well developed than at the present time. The assertion I made there was made only as a very rough statement of the facts, that it rested on a single observation and that I have never attempted to study the matter any further. It may be correct and it might be considerably off from the fact. I would not now put the emphasis on that which I would have put on it a few years ago. Very obviously we have progressed in perfecting technique and can not be held strictly accountable for statements made a few years ago and should be allowed to revise those in some degree.

Mr. Jackman: I do not want to misquote you, but I do desire to call your attention to this recent work of yours on page 252, from your knowledge of nutrition, in which you state, after giving the data of experiments, that "From this observation McCollum and Davis drew the conclusion

that skimmed milk contains much more fat-soluble A than could be accounted for on the basis of its fat content. They expressed their belief that about half the fat-soluble A con- [fol. 561] tained in milk is removed with the butter fat in swimming with the centrifugal separator, and half remains behind in the skimmed milk."

Doctor McCollum: I made the statement; there is no doubt about that.

Mr. Jackman: Is there anything since from your experiments which would change your mind on it?

Doctor McCollum: Nothing, from my own experiments, but Professor Hart and Doctor Steinburg, of Wisconsin, have reported experiments which they say represent a very careful inquiry into this subject.

This manuscript of my book, of course, was handed in something like 12 months ago now, and I would be perfectly willing to revise my views on the views of Hart and Steinburg's more thorough investigation.

Mr. Jackman: As I understand you, these ideas of how much is and how much is not of a particular vitamine are all approximations, and very rough?

Doctor McCollum: They are approximations; yes.

Mr. Jackman: And it may be over fifty and may be under fifty?

Doctor McCollum: I would scarcely say it would be over fifty.

Mr. Jackman: If you took milk for a long time as the sole source of nutriment it would not be an ideal food would it?

Doctor McCollum: It is too poor in iron.

Mr. Jackman: And it is too poor in other elements, is it not?

Doctor McCollum: Well, it would be very difficult to name one and put very much emphasis on it.

Mr. Jackman: For example, it is too poor in this element which you now, I think, call vitamine D?

Doctor McCollum: No; it is quite sufficient, provided the inorganic content of the diet is approximately the optimum.

Mr. Jackman: I understood from your experiment that you took some cod-liver oil, for example, and took out the entire content of the vitamine A.

Doctor McCollum: Yes, sir.

Mr. Jackman: And that you then cured rickets with the administration of that?

Doctor McCollum: I did.

Mr. Jackman: So that, as I understand the cause of rickets as you have it—this is the layman's view now from reading your book—it comes from the proportion of calcium and phosphorus that are combined in the food?

Doctor McCollum: It does.

Mr. Jackman: And that if you have the proper proportions of calcium and phosphorus in the food you would not have rickets?

Doctor McCollum: No; I would not say that.

Mr. Jackman: I mean——

Doctor McCollum (interposing): Under those circumstances one can succeed with the minimum amount of the vitamine B. The requirements for that substance are, under those circumstances, the minimum. I have, I believe, never made the assertion that the vitamine D is dispensable, but our demands for it go down in proportion as we make other components in the diet near the optimum—then we succeed with the minimum of the D. Conversely, when the minimum of the diet is faulty we are compensated to some extent by increasing the vitamine D.

Mr. Jackman: In this recent brochure which you have put out as to these experiments on teeth you report that the areola tissues were the least hampered by foods high in calcium and fat soluble A, those both high in calcium and cod-liver oil, and those low in calcium and in cod-liver oil.

Doctor McCollum: Are you reading from my book?

Mr. Jackman: I am reading.

Doctor McCollum: Then that is what I said. This is too complicated for me to be certain of the accuracy from a verbal report of it.

Mr. Jackman: I have it here.

Doctor McCollum: I will take your word for it if you say you read it.

Mr. Jackman: And even if you have rickets in a child and you do not give him cod-liver oil, but put him in the sunlight or under an ultra violet ray that seems to have the effect of having the child develop within himself this vitamine D, or something which cures the rickets.

Doctor McCollum: My own belief in connection with this is that the efficacy of sunlight is overestimated; that it is a valuable hygienic agency there is no question; that it does tend to protect against the effects of faulty inorganic content, I grant; but that it takes the place of a satisfactory diet I would be the last to admit.

Mr. Jackman: I am not speaking of a satisfactory diet; I am speaking of the absence of this so-called vitamine D.

Doctor McCollum: But I had the feeling that a little supplementary comment on that was necessary to make it clear.

Mr. Jackman: Now let us see. You are familiar, of course, with the experiments and reports which have been made by Hess and Unger with reference to sunlight?

Doctor McCollum: Yes.

Mr. Jackman: In which they state that sunlight and hygienic conditions are one of the main factors in the prevention of rickets in this country?

Doctor McCollum: That idea, I may say, is very old and dates, in fact, from 1650.

Mr. Jackman: Well, you agree with it?

Doctor McCollum: Yes; I agree with that.

Mr. Jackman: And I understand in your comment on rickets that you state that the malnutrition of a specific type rarely, if ever, occurs uncompensated either in man or animal living on a diet of ordinary food fats, even when the list of foods available is greatly restricted and the diet unsatisfactory to a pronounced degree?

Doctor McCollum: Yes.

Mr. Jackman: And that the specific diseases, with the possible exception of scurvy, can be produced as uncomplicated syndromes only by a carefully planned experimental diet?

Doctor McCollum: Yes, sir.

Mr. Jackman: Now, if we take skimmed milk as compared with whole milk, and for the purpose of this discussion I would like to assume that it is out of the same cow, at the same time, and in the same pail, because that is the only way we can properly compare it, is it not?

Doctor McCollum: Yes, sir.

Mr. Jackman: For example, if you had a test on a cow down in Illinois and had a test on a cow in Wisconsin you might get very different results.

Doctor McCollum: Not if they were on the same feed.

Mr. Jackman: Yes; but the mere fact it was milk you would have to know they were fed the same thing, and there is some indication, is there not, also, that there is some difference in the breed?

Doctor McCollum: I do not think there is very weighty evidence that the breed has anything to do with it, and I also believe that the effect of food on quality of milk has been

somewhat overemphasized, so far as the milk of a dairy cow goes, because summer and winter the dairy cow is fed an abundance of forage plants.

I was the first one, in 1915, to call attention to the unique dietary properties of leaves. Those experiments were all carried on with dry alfalfa first, but later on with other dried leaves.

I think, unless the feeding situation is greatly intensified and made very difficult from our successful dairy practice there is very little reason to emphasize the importance in human nutrition of summer milks over winter milks. The principle is sound, but in actual practice I think it is perhaps less important than one might think from some of the testimony we hear.

Mr. Jackman: You got some rather disastrous results in feeding your cows oats plants exclusively, for instance?

Doctor McCollum: Yes.

Mr. Jackman: And wheat plants?

Doctor McCollum: Yes.

Mr. Jackman: Now, just for a moment on that. It is quite notorious that a Holstein cow gives a great deal more milk, but a less butter-fat content, than a Guernsey or Jersey cow; is it not?

Doctor McCollum: With a smaller percentage of fat.

Mr. Jackman: That is, the Holstein?

Doctor McCollum: Yes.

Mr. Jackman: But, as I understand your observations or your belief, the mere fact that the Holstein cow's milk contains a less percentage of butter fat than the Jersey cow would not make any difference in the amount of the vitamine content of the milk.

Doctor McCollum: I know no evidence that would indicate that the fats of those two milks should be of any appreciable difference.

Mr. Jackman: Milk is rich in calcium and phosphorus, is it not?

Doctor McCollum: Yes, sir.

[fol. 562] Mr. Jackman: And that is equally true whether it is the skimmed milk or whether it is the whole milk?

Doctor McCollum: Yes, sir.

Mr. Jackman: There is not any difference in that?

Doctor McCollum: No.

Mr. Jackman: Now, vegetables, on the other hand, are relatively poor in both calcium and phosphorus?

Doctor McCollum: The tuber, root and seed vegetables, yes; the leaves not so.

Mr. Jackman: When you speak of leaves, you mean spinach and not storage vegetable plants?

Doctor McCollum: Yes, sir.

Mr. Jackman: There is only about 13 per cent of milk which consists of the various dissolved substances, and the balance is water.

Doctor McCollum: About that.

Mr. Jackman: And it is too bulky, as I understand you, to be satisfactory as a sole food for an adult?

Doctor McCollum: Yes.

Mr. Jackman: I think you also take the position that most animal and veg-table fats are singly or collectively, faulty in a sufficient degree to interfere with development and that the food must be so selected as to compensate for deficiencies of one diet by those properties of another and this makes a properly balanced dietary.

Doctor McCollum: That is my contribution to human welfare up to the present time, sir.

Mr. Jackman: And I understand you also take the position that the proteins of muscle, liver and kidney are in general more valuable for enhancing the value of cereal and legume seeds than are the proteins of milk?

Doctor McCollum: I agree with that, sir.

Mr. Jackman: You also take the position, as I understand you, that milk in its raw state is an unsurpassed medium for the growth of bacteria, such as typhoid, tuberculosis, and scarlet fever?

Doctor McCollum: I do.

Mr. Jackman: And that all milk in the cities should be pasteurized?

Doctor McCollum: Yes.

Mr. Jackman: Now, pasteurization, as I understand, consists of heating to 145° for 30 minutes and then cooling?

Doctor McCollum: Yes.

Mr. Jackman: This heat destroys to a large extent the vitamine C, does it?

Doctor McCollum: It does.

Mr. Jackman: And that is particularly true if the heating is in the presence of oxygen, in the air?

Doctor McCollum: Yes, sir.

Mr. Jackman: Vitamine A is affected also by heating, is it not, to a certain degree?

Doctor McCollum: We do not know how much it is affected by high temperatures uncomplicated by oxidation.

Mr. Jackman: I mean if you heat milk in the presence of air, not in a vacuum.

Doctor McCollum: It is then gradually destroyed; yes, sir.

Mr. Jackman: And if milk stands after it has been heated even in a vacuum, the vitamine A depreciates, does it not?

Doctor McCollum: You mean at all temperatures?

Mr. Jackman: No; heated to the degree of temperature necessary for sterilization.

Doctor McCollum: And continued that way?

Mr. Jackman: Yes sir; for 30 minutes.

Doctor McCollum: It would continue slowly to be destroyed.

Mr. Jackman: So that if we take this same sample of milk and skim one sample and leave the other sample unskimmed we have the same proteins, do we not?

Doctor McCollum: Yes, sir.

Mr. Jackman: We have the same calcium and the same phosphorus?

Doctor McCollum: Yes, sir.

Mr. Jackman: We have the same amount of milk sugar?

Doctor McCollum: Yes, sir.

Mr. Jackman: And the same amount of mineral salts?

Doctor McCollum: Yes, sir.

Mr. Jackman: We have the same amount of vitamine C—that is correct, is it not?

Doctor McCollum: If the milks have been treated alike.

Mr. Jackman: I am taking it right from the cow and separating it.

Doctor McCollum: Yes; that is right.

Mr. Jackman: And we have the same amount of vitamine B?

Doctor McCollum: Yes, sir.

Mr. Jackman: And the only difference then between the skimmed milk and the whole milk is that the skimmed milk does not contain as large a proportion of vitamine A as whole milk.

Doctor McCollum: With the possible qualification of the fourth vitamine.

Mr. Jackman: That is this so-called vitamine D?

Doctor McCollum: It goes with the fats, in great measure, at any rate.

Mr. Jackman: Now, if I take a baby and I feed him some skimmed milk from this cow, and I give him some orange juice, that baby gets vitamine A, does he not?

Doctor McCollum: He gets a small amount.

Mr. Jackman: Do you know how much vitamine A is necessary for an infant?

Doctor McCollum: We do not know how much of any vitamine is necessary for any individual. We can tell you this, in a certain number of cases, what is approximately a minimum amount of a given food which will meet the requirements of an experimental animal of one or another of the vitamines.

Mr. Jackman: Yes, I understand that, but what I had in mind was, Doctor—I think you misunderstood me—is there any data as to the amount of vitamine A which is necessary for an infant?

Doctor McCollum: No; nothing that could be looked upon as even approximately exact.

Mr. Jackman: Now, it is generally regarded, even by nutrition experts, is it not, that an adult will not require as much vitamine A as an infant?

Doctor McCollum: That has been repeatedly asserted; yes, sir.

Mr. Jackman: And you have found that to be true in your experiments, as far as the rats are concerned, have you not?

Doctor McCollum: No; I never have made that statement on the basis of my own observations. I have repeatedly quoted others as having said that.

Mr. Jackman: It may be I have taken others; but that has been generally reported, has it not?

Doctor McCollum: It has been reported several times from English investigators.

Mr. Jackman: Now, there are a very considerable number of common foods such as we all use which contain these various vitamines?

Doctor McCollum: There are.

Mr. Jackman: You are familiar with the table, are you I know you are—in Mr. Eddy's book—Eddy, of Columbia University?

Doctor McCollum: Oh, yes.

Mr. Jackman: In which he has tabulated these vitamines and the amounts and proportion in which vitamine is supposed to be contained in the various foods.

Doctor McCollum: He does not give amounts; he gives relative values, indicated by plus.

Mr. Jackman: That is, he uses a legend indicating, by zero, nothing; and then he indicates by crosses?

Doctor McCollum: Yes.

Mr. Jackman: And, as I understand it, the table, as far as you are concerned, is approximately correct, in your judgment?

Doctor McCollum: In general.

Mr. Jackman: I have a copy here, may it please the committee, and without taking the time, although it is very interesting, I will offer it in the record.

(The paper referred to is as follows:)

EXHIBIT 65 GIM

Chapter V. The Sources of the Vitamine

Having now considered the general principles involved in vitamine testing, we may justly ask what information they have yielded us in regard to the distribution of the vitamines in nature. If we must include vitamines in our diets it is [fol. 563] important to know how to select foods on this basis; hence a classification of them on the ground of vitamine distribution becomes essential. The newness of the subject and the limited tests that have been made, as well as the uncertainty residing in the test results, makes any classification presented more or less approximations; but we present such attempts as have been made, with the understanding that these tabulations are merely guides and not quantitative measurements in the sense that tables giving caloric values of protein, fat, and carbohydrate content are. The following table has been freely copied from a report of the British Medical Research Committee, to which acknowledgment is hereby given.

Table I.

[Pages 50 and 51 of the British medical research committee's report.]

Classes of foodstuffs	Vitamine A.	Vitamine B.	Vitamine C.
Fats and oils:			
Butter	xxx	o	
Cream	xx	o	
Cod-liver oil	xxx	o	
Fats and oils—Continued.			
Mutton and beef fat or suet	xx		
Lard	o		

Table I.—Continued

Classes of foodstuffs.	Vitamine A.	Vitamine B.	Vitamine C.
Fats and oils—Continued.			
Olive oil	o		
Cottonseed oil	o		
Coconut oil	o		
Cocoa butter	o		
Linseed oil	o		
Fish oil, whale oil, herring oil, etc	xx		
Hardened fats (hydrogenated) of animal or vegetable origin	o		
Margarine from animal fat	(1)		
Margarine from vegetable fat or lard	o		
Nut butters	x		
Meat, fish, etc.:			
Lean meat (beef, mutton, etc.)	x	x	x
Liver	xx	xx	x
Kidney	xx	x	
Heart	xx	x	
Brain	x	xx	
Sweetbreads	x	xx	
Fish, white	o	(2)	
Fish fat (salmon, herring, etc.)	xx	(2)	
Fish roe	x	xx	
Tinned meats	(?)	(3)	o
Milk, cheese, etc.:			
Milk, cow's, whole milk	xx	x	x
Milk, cow's, skim	o	x	x
Milk, cow's, dried whole	(4)	x	(5)
Milk, cow's, boiled whole	(?)	x	(5)
Milk, cow's, condensed, sweetened	x	x	(5)
Cheese, whole milk	x		(5)
Cheese, skim milk	o		
Eggs, fresh	xx	xxx	o(?)
Eggs, dried	xx	xxx	o(?)
Cereals, pulses, etc.:			
Wheat, maize, rice (whole germ)	x	x	o
Wheat, maize, rice germ	xx	xxx	o
Wheat, maize, rice bran	o	xx	o
White wheat flour, pure corn flour, polished rice, etc	o	o	o
Cereals, etc.—Continued.			
Custard powders, egg substitutes, prepared from cereal products	o	o	o
Linseed millet	xx	xx	o
Dried peas, lintils, etc		xx	
Pea flour, kilned		o	o
Soy bean, haricot bean	x	xx	o
Germinated pulses or cereals	x	xx	xx
Vegetables and fruits:			
Cabbage, fresh, raw	xx	x	xxx
Cabbage, fresh, cooked		x	x
Cabbage, dried	x	x	(6)
Cabbage, canned			(6)
Swedes, raw expressed juice			(7)
Lettuce	xx	x	x
Spinach	xx	x	x
Carrots, fresh, raw	x	x	x
Carrots, dried	(6)		(6)
Beetroot, raw expressed juice	x	x	x
Potatoes, raw			x
Potatoes, cooked			xx
Beans, fresh scarlet runners, raw			
Lemon juice			xxx
Lemon juice, preserved			
Lime juice, fresh			xx
Lime juice, preserved			(6)
Orange juice, fresh			xxx
Raspberries			xx
Apples			x
Bananas	x	x	(6)
Tomatoes, canned			xx
Nuts	x	xx	
Miscellaneous:			
Yeast, dried	(?)	xxx	
Yeast extract and autolysed	(?)	xxx	o
Meat extract	o	o	o
Malt extract		(7)	
Beer		o	o
Honey		x	

[1] In proportion to animal fat used.
[2] Very slight, if any.
[3] Very slight.
[4] Less than xx.
[5] Less than x.
[6] Very slight.
[7] In some specimens.

xxx indicates abundant; xx relatively large; x present in small amount; o absent.

The following table has been compiled from a review of both British and American data and represents a rather more complete classification than the British report. The four plus system has also been used to permit more complete comparisons.

EXHIBIT 68 GIM.

TABLE 2.—*Sources of vitamines*

Foodstuff	A	B	C
Meats:			
Beef heart	x	x	?
Brains	xx	xxx	x?
Codfish	x	x	?
Cod testes	x		
Fish roe	x	xx	?
Herring	xx	xx	?
Horse meat	x	x	
Kidney	xx	xx	
Lean, muscle	o	o	x?
Liver	x	x	x?
Pancreas	o	xxx	
Pig heart	x	x	?
Placenta		x	
Thymus (sweetbreads)	o	o	o
Vegetables:			
Beet root	x	x	xx
Beet-root juice	?	(1)	xxx
Cabbage, dried	xxx	xxx	x
Cabbage, fresh	xxx	xxx	xxxx
Carrots	xxx	xxx	xx
Cauliflower	xx	xxx	xx
Celery	?	xxx	?
Chard	xxx	xx	?
Dasheens	x	xx	?
Lettuce	xx	xx	xxxx
Mangles	xx	xx	?
Onions	?	xxx	xxx
Parsnips	xx	xxx	
Peas (fresh)	x	xx	xxx
Potatoes	o	xxx	xx
Potatoes (sweet)	xxx	xx	?
Rutabaga		xxx	
Spinach	xxx	xxx	xxx
Cereals:			
Barley	x	xxx	?
Bread (white)		x?	
Bread (wholemeal)	x	xxx	?
Maize	(2)	xxx	?
Oats	x	xxx	?
Rice, polished	o	o	o
Rice (whole grain)	x	xxx	o
Rye	(2)	xxx	o
Corn, embryo		xxx	
Corn (kafir)		xxx	
Chin (see Maize)			
Corn pollen		xx	
Malt extract	o	o	o
Wheat bran	o	x	o

Foodstuff	A	B	C
Cereals—Continued			
Wheat embryo	xx	xxx	o
Wheat endosperm	o	o	o
Wheat kernel	x	xxx	o
Other seeds:			
Beans, kidney		xxx	
Beans, navy		xxx	o
Beans, soy	x	xxx	o
Cotton seed	xx	xxx	
Flaxseed	xx	xxx	
Hemp seed	xx	xxx	
Millet seed	xx	xxx	
Peanuts	x	xx	
Peas (dry)	x?	xx	
Sunflower seeds	x		
Fruits:			
Apples		xx	xx
Bananas	?	x	xx
Grapefruit		xxx	xxx
Grape juice		x	x
Grapes	o	x	x
Lemons		xxx	xxx
Limes		xx	xx
Oranges		xxx	xxx
Pears		xx	xx
Raisins		x	x
Tomatoes	xx	xxx	xxx
Oils and fats:			
Almond oil	o	o	o
Beef fat	x	o	o
Butter fat	xxxx	o	o
Coconut oil	o	o	o
Cod-liver oil	xxxx	o	o
Corn oil	o	o	o
Cottonseed oil	o?	o	o
Egg-yolk fat	xxxx	o	o
Fish oils	xx	o	o
Lard	o?	o	o
Oleo, animal	x	o	o
Oleo, vegetable	o	o	o
Olive oil	o	o	o
Pork fat	o?	o	o
Tallow	o	o	o
Vegetable oils	o?	o	o
Nuts:			
Almonds	x	xxx	
Brazil nuts		xxx	
Chestnuts		xxx	
Coconuts	xx	xxx	
English walnuts		xxx	

Foodstuff	A	B	C
Nuts—Continued:			
Filberts		xxx	
Hickory nuts	x	x	x
Pine nuts	x	x	x
Dairy products:			
Butter	xxxx	o	o
Cheese	xx	x	?
Condensed milk	xx	x	o
Cream	xxx	x	?
Eggs	xxxx	xx	o
Milk powder (skim)	x	xxx	x?
Milk powder (whole)	xxx	xxx	x?
Milk whole	xxx	xxx	xx
Whey	x	xxx	x

Foodstuff	A	B	C
Miscellaneous:			
Alfalfa	xxx	xxx	
Blood		(1)	
Clover	xxx	xxxx	?
Honey		xx	o
Malt extract	o	o	o
Nectar	o	o	o
Timothy	xx	xxx	
Yeast, brewer's	o	xxxx	o
Yeast cakes	o	xx	o
Yeast extract	o	xxx	o

[1] Little. [2] x in yellow, o in white. [3] Varies with sauce.

Mr. Jackman: Now, aside from containing some of this fat soluble A, the chief value of butter lies in the calories, does it not?

Doctor McCollum: In butter?

Mr. Jackman: Yes.

[fol. 564] Doctor McCollum: Yes.

Mr. Jackman: And are you familiar with the fact that the caloric value of coconut oil is slightly higher than that of butter fats?

Doctor McCollum: The difference between fats generally is almost insignificant; they are approximately alike.

Mr. Jackman: Three thousand nine hundred and eighty, I believe, in butter fat and 4,000 and some in coconut fat?

Doctor McCollum: It is in that region; yes.

Mr. Jackman: If you take and add sugar to milk, does it add any vitamines?

Doctor McCollum: No; not if it is pure sugar.

Mr. Jackman: I mean the ordinary cane or beet sugar of commerce contains no vitamines of any kind?

Doctor McCollum: No.

Mr. Jackman: So that if you took skimmed milk and added to it cane sugar it would not add anything in the way of vitamines?

Doctor McCollum: No.

Mr. Jackman: I understood you to say in your statement this afternoon that you agreed with this article of Doctor Marriott's, which had been read here yesterday?

Doctor McCollum: In so far as it expresses the need of betterment of practices in feeding children.

Mr. Jackman: If a child gets too large a sugar content it is dangerous, is it not?

Doctor McCollum: Yes, sir.

Mr. Jackman: And, as I understand it, you do not agree with the feeding to children of this condensed—that is, the sweetened condensed milk?

Doctor McCollum: I have always condemned it, sir.

Mr. Jackman: Now, let us turn, for example, to these compounds and these various milks: There are on the market, Doctor, as you probably know, a number of, first, evaporated skimmed milks.

Doctor McCollum: Yes.

Mr. Jackman: Put out by the Hires Co., of Philadelphia, and by the Laurel Co., and others, the Plantation Milk and the Laurel milk and other brands?

Doctor McCollum: I do not know the manufacturers.

Mr. Jackman: Now, those skimmed evaporated milks you would classify, as I understand it, in exactly the same category that you do Hebe?

Doctor McCollum: With the exception of the caloric content.

Mr. Jackman: That is, Hebe has a higher caloric content than they have?

Doctor McCollum: Yes.

Mr. Jackman: Cocoa contains a certain percentage of vegetable fat?

Doctor McCollum: It does.

Mr. Jackman: Now, if you took skimmed milk and you added to that skimmed milk cane sugar and you added to that enough cocoa to color it, you would not put any vitamines into that compound, would you?

Doctor McCollum: No, sir.

Mr. Jackman: And as far as you were concerned you would place it in the same category as you would Hebe or compounds, except that it has not as much caloric value?

Doctor McCollum: That is, from an actual food value.

Mr. Jackman: That is what I mean.

Doctor McCollum: It would be essentially the same; yes.

Mr. Jackman: And you would not regard that as a compound to feed children or infants, would you?

Doctor McCollum: Certainly not to infants; no.

Mr. Jackman: Would you regard it as a compound which would promote the health of a child?

Doctor McCollum: Such a preparation might be used in small amounts provided the rest of the diet were carefully planned so as to make it good.

Mr. Jackman: Well, Hebe could be used in exactly the same way, could it not?

Doctor McCollum: It is possible to use it in exactly the same way; yes sir.

Mr. Jackman: Now, if we used Hebe in cooking and baking, and it were not used for the purpose of feeding to an infant, there would not be much objection to it, would there?

Doctor McCollum: The objection is—there would be no objection provided it was not made to replace milk in the cookery, or otherwise in the diet. If it is so used, then the resulting diet would be of a less satisfactory nature when Hebe were used than if a corresponding amount of milk were used.

Mr. Jackman: See if we can put this in a nutshell. We get right back to this same proposition that it has got less vitamine A than the whole milk has.

Doctor McCollum: Yes, sir.

Mr. Jackman: Now, you know, do you not, that the bakers use sweetened milk in their baking?

Doctor McCollum: I know they do.

Mr. Jackman: Wholesale bakers?

Doctor McCollum: Yes.

Mr. Jackman: You know that they use powdered skimmed milk, don't you?

Doctor McCollum: It is a very wholesome practice; yes.

Mr. Jackman: But the powdered skimmed milk contains none of the vitamine A.

Doctor McCollum: Except this small fraction we have been——

Mr. Jackman: Except the same proportion and in the powdering of the product if it is made by the Soule process, the experiments which have been conducted show there are certain of these dried or powdered milks where the milk is thrown out in a jet where the vitamine A is killed by excessive heat in the presence of oxygen.

Doctor McCollum: In the skimmed milk powder the amount of vitamine A must be very small.

Mr. Jackman: So that if bakers and confectioners use sweetened skimmed milk in the baking of the bread of commerce and the pastries and cakes of commerce, they do not get any vitamine A in, do they, except what is in the skimmed milk?

Doctor McCollum: I will get you to repeat that. I think I missed something.

Mr. Jackman: Just see if I get it correct. Bakers use sweetened skimmed milk for baking?

Doctor McCollum: Yes, sir.

Mr. Jackman: Buy it in barrels?

Doctor McCollum: Yes, sir.

Mr. Jackman: They sometimes use powdered skimmed milk?

Doctor McCollum: Yes, sir.

Mr. Jackman: They do not get any vitamine A except such as is contained in the skimmed milk, do they?

Doctor McCollum: That is all they put into the bread.

Mr. Jackman: And that is the ordinary process in baking, is it not?

Doctor McCollum: Yes.

Mr. Jackman: Now, if you cook in the presence of oxygen; for instance, if you take and cook up an article of food in the air, the way the housewife does, and not in a vacuum, fat soluble A is affected to a certain extent—we do not know how much—is it not?

Doctor McCollum: Yes, sir.

Mr. Jackman: And the C is gone?

Doctor McCollum: Yes sir.

Mr. Jackman: And the B is not very readily affected by heat?

Doctor McCollum: No.

Mr. Jackman: That is the consensus of opinion?

Doctor McCollum: It is, yes.

Mr. Jackman: You have heard the testimony of Mr. Grindrod this morning, as to the manner in which Hebe and evaporated milks are made?

Doctor McCollum: Yes.

Mr. Jackman: They are made in exactly the same way?

Doctor McCollum: Yes.

Mr. Jackman: And you understood that they are put into a vacuum and evaporated in the vacuum and the water content taken out?

Doctor McCollum: Yes sir.

Mr. Jackman: Before they are put in there they are put in a fore warmer and brought up to the boiling point in the presence of air? Would that affect the Vitamine A content?

Doctor McCollum: To some extent.

Mr. Jackman: So that the ordinary evaporated milk would have its vitamine A affected?

Doctor McCollum: To some extent.

[fol. 565] Mr. Jackman: Have there ever been any experiments made as to how much that was affected?

Doctor McCollum: No.

Mr. Jackman: I think you and Roseneau conducted some experiments?

Doctor McCollum: I conducted some experiments, yes, several years ago—not sufficiently complete to enable me to estimate very accurately, because this is a time-consuming operation. I would much rather discover the cause of rickets and another vitamine than to test a thousand samples of condensed milk fats. This we know, that those fats in canned milks are by no means free from vitamine A. As to how much was destroyed, I would not attempt to say.

Mr. Jackman: After they took this milk out of the vacuum pan in the process of manufacture, the evaporated milk, you know it comes out in a thin stream while boiling hot over the coolers before it goes to the canning machine.

Doctor McCollum: I believe that is the process.

Mr. Jackman: And the stream that comes down is just about as thin as this paper. Now, would that exposure to the air as it comes down have any effect upon the vitamine A?

Doctor McCollum: Well, the tendency would be to destroy some.

Mr. Jackman: And the tendency in all evaporated milk would be to kill the C, would it not, by that process?

Doctor McCollum: Yes.

Mr. Jackman: So, in the manufacture of the evaporated milk it goes into what is known as a sterilizer and is heated up to approximately 240 after the cans are sealed hermetically?

Doctor McCollum: Yes.

Mr. Jackman: And it stays there in different temperatures, according to the different processes, for approximately 30 or 40 minutes. That would have some effect upon the C, would it not?

Doctor McCollum: I think so.

Mr. Jackman: Would it have any effect on the A?

Doctor McCollum: Probably it would. The can contains a little air and high temperature would tend to destroy it, yes.

Mr. Jackman: So that in your judgment the evaporated canned milk would actually be deficient in both A and C whether whole milk or whether it was skimmed milk?

Doctor McCollum: It would be deficient as compared with untreated milk.

Mr. Jackman: That is what I am making the comparison with.

Doctor McCollum: Yes.

Mr. Jackman: Now, in the condensed sweetened whole milk they preserve the milk by putting in cane sugar?

Doctor McCollum: Yes, sir.

Mr. Jackman: That does not destroy these spores and it may be the carrier of disease.

Doctor McCollum: It may be possible if carries disease; yes, sir.

Mr. Jackman: The spores are still there.

Doctor McCollum: The milk is in a great measure preserved by the amount of sugar it contains.

Mr. Jackman: And it also preserves the bacteria.

Doctor McCollum: It prevents their development and permits them to lie there in a dormant state, so that when more favorable conditions will arise, as would be the case when the milk is diluted suitably for use, they can grow.

Mr. Jackman: In other words, when that milk is taken out of the can and diluted to feed to a baby, the bacteria can multiply?

Doctor McCollum: Yes, sir.

Mr. Jackman: Now, coconut fat. There is nothing deleterious about that, is there?

Doctor McCollum: I think you can say there is nothing deleterious about it.

Mr. Jackman: It is a fat which is used very extensively in the manufacture of nut margarines?

Doctor McCollum: Yes, sir.

Mr. Jackman: It is used in the manufacture of the chocolates and the confections that we get, is it not?

Doctor McCollum: Yes, sir.

Mr. Jackman: For instance, these Nabisco wafers that the ladies give you with tea in the afternoon have coconut fat between them as a sweetener.

Doctor McCollum: I understand that is coconut fat.

Mr. Jackman: Now, if I take a can of Hebe and feed it to a baby and give the baby some orange juice and a little

cod-liver oil, he would get all the vitamine A necessary for him.

Doctor McCollum: As far as we can see at present if you give him cod-liver oil and orange juice. I might add, however, in my own mind; there is a question as to whether a baby would assimilate coconut oil as well as he does butter fat.

Mr. Jackman: You have not any experimental data on that, have you?

Doctor McCollum: No experimental data, but I think there is very good reason to believe that the butter fat is more appropriate food fat than the other fats for the young.

Mr. Jackman: Why do you say that?

Doctor McCollum: Well, one reason is this: If you take some butter fat—and this Doctor Ladd will fully appreciate——

Mr. Jackman: Why do you leave me out of that?

Doctor McCollum: Because I take it a lawyer is not a chemist.

Mr. Jackman: Well, I am.

Doctor McCollum: Then you will fully appreciate this, sir. Suppose we take some coconut oil in one flask and some butter fat in another—they are pure fats in both cases—and we treat each one of these flasks with some potassium hydroxide, dissolved in alcohol, then we take the same amount of fat, the same amount of alkali, the same amount of alcohol for a solvent, keep them at the same temperature and examine them to see which one digests the faster; in other words, which one goes into soap faster, you would be amazed, if you have never tried it, to see how much easier butter fat is saponified than the other fats.

Mr. Jackman: Are you familiar with the experiments of Lejune as to the digestibility of coconut fat?

Doctor McCollum: I am familiar with the experiments of Lejune as to the digestibility of coconut fat in the digestive tracts of adults; yes.

Mr. Jackman: In other words, you agree with what Mr. Grindrod said about emulsification this morning?

Doctor McCollum: No, indeed.

Mr. Jackman: You would not agree with that?

Doctor McCollum: No, indeed.

Mr. Jackman: If that is true, doctor, why is it that Doctor Gerstenberger, of Cleveland, has taken the preparation called S. M. A., concerning which this committee has been told, and has taken out the butter fat and has put back into that coconut fat with a little cod-liver oil?

Doctor McCollum: That is because he is experimenting to try to make a good baby food.

Mr. Jackman: You have heard the results of the experiments on babies here. I do not know whether you heard his testimony or not?

Doctor McCollum: No; I was not here at the time he testified, but he gave me an ear full of private testimony.

Mr. Jackman: He told you that it was very efficient, did he not?

Doctor McCollum: Yes, indeed.

Mr. Jackman: Did you hear the doctor from New York who made the statement yesterday that it was very efficient?

Doctor McCollum: I heard that. I have also heard much about the efficiency of a dozen kinds of baby foods on the market.

Mr. Jackman: You do not think much of any of them?

Doctor McCollum: I am not convinced yet that any of them are what they are said to be.

Mr. Jackman: So that if I gather from your testimony correctly, in order to shorten this matter up. Hebe is a healthful food product and not a deleterious food product, but that it does not contain as much vitamine A as whole milk?

Doctor McCollum: Well, perhaps we ought to come to a little clearer understanding as to just what definition you are going to give to healthful product. That is, I will grant that it is a healthful product, provided you will enter as a qualification to that admission that it is used in such combination with other foods that it will not interfere with the making of a satisfactory diet. The ingredients of Hebe are not in themselves deleterious.

Mr. Jackman: Nothing poisonous of any kind in it?

Doctor McCollum: Nothing poisonous; no, sir. You appreciate I want to be very careful about fine points here. [fol. 566] Mr. Jackman: Well, I am not trying to draw fine distinctions. I am trying to get this thing in shape where we will understand, and I think I understand your position quite thoroughly on that. You stated that the only complete food for an infant is mother's milk?

Doctor McCollum: It is the best one.

Mr. Jackman: The fat globules of the cow's milk differ from the mother's milk?

Doctor McCollum, Oh, yes.

Mr. Jackman: Did you ever know anything about the fact that if you add sugar to milk you increase the size of the fat globules?

Doctor McCollum: No. I have heard something about it, but I have had no experience with it.

Mr. Jackman: Have you ever heard the statement that if you add sugar, for instance, in this sweetened condensed milk, the size of the fat globules goes up from 0.005 to 0.020?

Doctor McCollum: I have heard something about that, but I do not know it.

Mr. Jackman: There is 42 per cent of this sweetened condensed milk that consists of sugar, is there not?

Doctor McCollum: I understand so.

Mr. Jackman: As I understand the analysis of human milk it coptains 3.75 per cent approximately of fat, 6 per cent of milk sugar, and 2.30 per cent of proteins.

Doctor McCollum: The composition varies considerably, of course.

Mr. Jackman: But that is substantially the general analysis that is given?

Doctor McCollum: I understand so; yes.

Mr. Jackman: Now, if you take this sweetened condensed milk and follow the directions on the can and dilute it so that you get down to 2.30 of protein as in the human milk, you get a sugar content of 17 per cent, or about three times the sugar content of the mother's milk, do you not?

Doctor McCollum: I think it would amount to that; yes.

Mr. Jackman: Then if you reduced the sugar content down to 6 per cent, as it is in the mother's milk, you get your fat and your protein proportions way below the level of the mother's milk?

Doctor McCollum: Yes, sir.

Mr. Jackman: And that is the reason why it is not a proper food for a baby, is it not?

Doctor McCollum: I would not say that is the only reason. That is one reason.

Mr. Jackman: Now, cow's milk, as compared with mother's milk, contains about three parts casein to one part albumen, whereas mother's milk contains about one part of casein to one part of milk albumen.

Doctor McCollum: Something like that, yes.

Mr. Jackman: And the result of that is that cow's milk produces a heavy curd in the child's stomach, does it not?

Doctor McCollum: A heavy curd, yes.

Mr. Jackman: And that is why you have modified the cow's milk when given to infants?

Doctor McCollum: That is one of the reasons, yes.

Mr. Jackman: You heard Doctor Richardson make the statement, did you not, that ring doves did not require any A?

Doctor McCollum: Yes; I think he said that.

Mr. Jackman: Do you agree with that?

Doctor McCollum: I do not know anything about that.

Mr. Jackman: You do know that rats do not require any vitamine C?

Doctor McCollum: Yes, sir; I know that.

Mr. Jackman: And you agree with that?

Doctor McCollum: Yes; I agree with that.

Mr. Jackman: And consequently in experimental data for scurvy you use guinea pigs?

Doctor McCollum: Yes.

Mr. Jackman: I understood you to say in some testimony that you gave in another hearing that the same laws governed animal and human nutrition if limited to mammals that suffer from scurvy.

Doctor McCollum: So far as the experimental data went at the time that was made. In fact, I do not know of any good illustration to the contrary now.

Mr. Jackman: Well, this testimony was given in November, 1921?

Doctor McCollum: Yes.

Mr. Jackman: Now, I think you produced—I was not fortunate enough to hear your testimony, but I understood you to say that you have made some experiments on some rats with Hebe, and you will correct me, please, if I misstate you in any way—in which you fed one group of rats 60 per cent of oats. What was it, oatmeal?

Doctor McCollum: Rolled oats.

Mr. Jackman: Rolled oats, and 22 per cent of Hebe. With another group of rats, you fed them 62 per cent of the diet with rolled oats and 22.5 per cent of Carnation?

Doctor McCollum: Yes, sir.

Mr. Jackman: Did you make any experiments on the rats at all in your laboratory, either you or anyone under your

direction, where you fed the rat Hebe as a sole source of diet?

Doctor McCollum: No; we did not do that.

Mr. Jackman: Did you feed any rats where they got Carnation as the sole source of diet?

Doctor McCollum: No.

Mr. Jackman: Did you make any experiments of any kind whereby you fed any of these experimental rats a larger proportion of Hebe than 22.5 per cent?

Doctor McCollum: No; we have not described any such experiments to you. We have some in progress now, but I could not speak of those yet; they are not far enough developed.

Mr. Jackman: In the hearing which you had in Wisconsin in November, 1921, in which you testified, there was some question asked you as to whether or not you had made some experiments with Hebe at that time, and you said that you had some going on. I noticed in the report of these experiments which was circulated by some of the gentlemen, the proponents of the bill, that the statement is made that these rats died 55 days after the experiments had started, and the experiments had been going on for about two months at the time you were in Wisconsin. Are those the same experiments?

Doctor McCollum: I would not attempt to give accurate information here regarding the dates of starting those experiments nor the length of life of the animal. The experiments were actually carried out in my laboratory, but I do not keep that data in my mind. We have had these experiments going, I may say, repeatedly, but I would not, without a very careful study of the situation be able to pick out any particular ones for giving specific data.

Mr. Jackman: I appreciate that. Have you any record, Doctor, of the amounts of the food intake of the rats in these experiments you told the committee about?

Doctor McCollum: We have a record of the food intake to this extent, that if we had four animals in a cage we know how long it took the four animals to eat a given weight of food. We did not make individual food intake records of those animals.

Mr. Jackman: So in these records which you have here you do not know the data as to the food intake of the respective animals?

Doctor McCollum: No; we do not know that. We did not regard as of importance any experiments of this kind for reasons which I can tell you if you care to have them.

Mr. Jackman: We will get into a long discussion on that if you do.

Doctor McCollum: It won't take a minute.

Mr. Jackman: But I might want to ask you about it.

Mr. Bryan: If you think it is of importance, go on and state it.

Mr. Jackman: One minute. Many of these gentlemen in experiments keep their animals in separate cages, do they not?

Doctor McCollum: Yes, sir.

Mr. Jackman: And they do that so they can tell the particular food intake of each individual animal?

Doctor McCollum: Yes.

Mr. Jackman: I understood you to say in commenting upon some experiments which had been made by Doctor Richardson and others in another connection, where the experiments had run over a period of approximately six or seven months, that it was not very safe to base results upon experiments of that length of duration. Am I correct in that?

Doctor McCollum: It depends on the nature of the experiment. If you are trying to compare two diets which are very closely similar in their properties, but one is slightly deficient as compared to the other, then you must continue your experiments over a long period in order to bring out that small difference in quality. Sometimes we [fol. 567] have found it necessary, in order to refine our technique, to carry animals through four, five, or even more generations, but that is simply for the refinement of observation, with a diet which is deficient in a small degree.

When you see nothing in the first generation, when you see nothing in the growth or fertility, but in succeeding generations these creatures may grow smaller and smaller and finally the strain grow out, we can refine our technique in that way. So no general statement as to the length of time necessary to observe an experiment can be made. We must, in every instance, carefully specify what it is we are trying to get at. Then I will tell you what my belief is regarding about how long one should observe in order to get a result that would be worth anything.

Mr. Jackman: I do not want to take up any more time because I do not want to weary the committee.

Doctor McCollum: No; that would take too long.

Mr. Jackman: You have not any data as to what is the result of experiments where the rat was fed an exclusive diet of Hebe as contrasted with Carnation?

Doctor McCollum: No; we have none of that kind.

Mr. Jackman: Why did you arrive at 22.5 per cent of Carnation?

Doctor McCollum: We arrive at that—I think it was arbitrary. If I remember now, I just decided—we are not likely to take more than this proportion of milk solids in the human diet—that it would be of interest to see whether a diet largely composed of a cereal grain would be as well supplemented by Hebe as that same diet of cereal grain, comparable in every way except in the character of the Hebe or canned milk which we put in—see whether the Hebe was as efficient in making good deficiency of diet of cereal as the other canned milk.

That is what the other experiments were for.

Mr. Jackman: What the experiment really shows is that Hebe has not as much vitamine A as the evaporated milk has.

Doctor McCollum: Certainly; that is one of the factors that we definitely found.

Mr. Jackman: But that was the only factor, was it not?

Doctor McCollum: That is the only factor that I have brought forward, yes.

Mr. Jackman: Now, I think you use the phrase "border line" do you not?

Doctor McCollum: Yes, sir.

Mr. Jackman: Or am I misquoting you and it is somebody else?

Doctor McCollum: No; that is my phrase.

Mr. Jackman: If you had these rats down to a point where by feeding them 22.5 per cent of Carnation milk they would be border line rats, that is, if you fed them 20 per cent they would get xerophthalmia and if you fed them 22.5 per cent and then if you had anything which was slightly less rich in vitamine A, you would get over the border line, would you not?

Doctor McCollum: Your expression of principle is sound. I would not agree to the figures.

Mr. Jackman: I am just taking the figures as illustrative.

Doctor McCollum: Yes.

Mr. Jackman: Do you know whether or not 22.5 per cent of Carnation milk, as compared with 60 per cent of rolled oats is on the border line?

Doctor McCollum: No.

Mr. Jackman: Never made any experiments to ascertain?

Doctor McCollum: No.

Mr. Jackman: As to whether or not there is a large or a small amount of any particular vitamine is very indefinite as applied to any food for the following reasons, is it not—

Doctor McCollum: I do not believe you made a complete statement in the first part of that sentence.

Mr. Jackman: I will restate it. If we take any particular article of food, the question as to whether or not there is a large or a small amount of any particular vitamine is a very indefinite statement for the following reasons:

First, because the sample may vary;

Second, because of the age of which it has been kept when test is made; and

Third, in milk it may vary with the period of the year, the feed which the particular cow has had and the period of lactation?

Doctor McCollum: All those factors may enter into the question you raise, but, of course, we would have to qualify this for different kinds of fat.

Mr. Jackman: For milk, say?

Doctor McCollum: But you mentioned milk in the beginning and made a more general statement in the first half

Mr. Jackman (interposing): Let us limit the whole question to milk.

Doctor McCollum: Then I grant it; yes.

Mr. Jackman: Now, whether or not anybody suffers from a lack of vitamine is evidenced, if I understand it, by the appearance of some so-called deficiency disease?

Doctor McCollum: No; that is the evidence of extreme deficiency.

Mr. Jackman: And I might have incipient scurvy and not show it?

Doctor McCollum: Yes; indeed.

Mr. Jackman: And there would be no way of telling it except as I developed the scurvy?

Doctor McCollum: There would be another way; yes.

Mr. Jackman: How?

Doctor McCollum: If you would give me a very complete record of your life, a full record for some time past, I would give you a pretty good and safe estimate as to where you stood in regard to being a border line case of scurvy.

Mr. Jackman: Now, these so-called deficiency diseases, such as polyadenitis, xerophthalmia, or scurvy are very rarely encountered in this country, are they not?

Doctor McCollum: Scurvy in infants is very common.

Mr. Jackman: I am reading you from your own book, page 30.

Doctor McCollum: That is, in the main, right, but I might say scurvy is fairly common. I have said that elsewhere.

Mr. Jackman: Yes.

Doctor McCollum: I might add for the information of the committee that this does not mean a partial deficiency, and a twilight zone of nutritional instability does not frequently occur. In fact it is the rule, and I have already given some of the evidence here to-day for that belief.

Mr. Jackman: If you try to produce xerophthalmia in a rat, all the rats that you try to produce it on do not get it, do they?

Doctor McCollum: There is a certain amount of variation, but nothing like what has been pointed out here to-day, provided any skill at all was used in the preparation of the data.

Mr. Jackman: But the proportions vary by different scientists?

Doctor McCollum: They do.

Mr. Jackman: Sometimes they get 50 per cent and sometimes more?

Doctor McCollum: Yes.

Mr. Jackman: When you try to get these deficiency diseases you try to separate by getting what you call the synthetic diet, do you not, when you want to produce it?

Doctor McCollum: Not necessarily. One of the diets on which we have regularly produced xerophthalmia in 100 per cent of animals, and one which can develop it readily, is a diet which contains 40 per cent of rolled oats. It is too

expensive and time consuming to use a synthetic diet for all our experiments, so that for our convenience we introduced this much rolled oats, but it does just as well.

Mr. Jackman: You have demonstrated by thorough experiments that rolled oats did not contain any?

Doctor McCollum: Oh, yes.

Mr. Jackman: You are familiar with the statement made by Drummond, are you not; that adult rats need little, if any, vitamine A?

Doctor McCollum: Yes; but I don't believe it.

Mr. Jackman: Now, where the diet is satisfactory, in all other respects it takes longer for xerophthalmia to develop in a rat than if the diet is below the optimum in quality and quantity in other respects?

Doctor McCollum: Yes.

Mr. Jackman: And Hopkins has reported he stopped xerophthalmia by two centimeters of skimmed milk per day?

Doctor McCollum: I do not think that is quite an accurate statement of the facts. You are talking about a real experiment, but I do not think that is quite the thing that Hopkins said. When did he refer to it? Was it back in 1896?

Mr. Jackman: I do not know. It is in your book.

Doctor McCollum: Well, it is not in there in just that form.

Mr. Jackman: Page 248, Doctor.

Doctor McCollum: I will make a note of that.

[fol. 568] Mr. Jackman: "In cases where the ulceration of the sclera of one eye is well developed and was beginning to show in the other, the process could be entirely arrested by the administration, suggested by the work of Hopkins, of two cubic centimeters of skim milk per day."

Doctor McCollum: Whose data does that refer to?

Mr. Jackman: It does not refer to any data; it is your statement?

Doctor McCollum: No; that is not my statement. It must be somebody else's.

Mr. Jackman: Page 248.

Doctor McCollum: It shows right in the first line I was talking about the experiments of others reported in 1913.

Mr. Jackman: Where it is marked?

Doctor McCollum: That is plain again. It says "Freise, Goldschmidt and Frank in 1913."

I am talking about their experiments. They got the suggestion from Hopkins. These are experiments I reported as a matter of history, that is all.

Mr. Jackman: And you do not agree with that?

Doctor McCollum: That may be so. Skimmed milk is one thing and skimmed milk is another. If they skim it with a spoon and leave a certain percentage of fat that is one thing. If they use centrifuge that is another thing. We can not tell what these old experiments were. They simply say skimmed milk.

Mr. Jackman: As a layman there seems to be wide variation in the results of these experiments.

Doctor McCollum: Largely because of the fact this sort of work has appealed to a lot of people as being research for everybody, and they all plunge in and report voluminous papers before they get their eyes open, and get any experiments that would warrant interpretation the way they interpret them.

Mr. Jackman: You would not report those people in your book, would you, who are not reputable?

Doctor McCollum: I wrote this as a history of what has appeared in scientific literature. I commented wherever I thought it worth while to interpret and give my own views.

Mr. Jackman: I do not notice any comments in there.

Doctor McCollum: Perhaps not on that particular one, but every book has its shortcomings.

Mr. Jackman: You spoke in your statement this afternoon about some records of Bloch in Denmark. The report of that data shows that the children there were suffering from a complication of faulty dietary factors, does it not?

Doctor McCollum: Yes.

Mr. Jackman: Now, you are familiar, are you not, with the statement of Hess and Unger of New York that in human nutrition there is not likely to be a deficiency of fat soluble A sufficiently pronounced to be a factor of importance?

Doctor McCollum: Yes; I am familiar with that.

Mr. Jackman: And he, in addition to being a scientist, is a practicing physician?

Doctor McCollum: He is a practicing physician.

Mr. Jackman: And pediatrician in New York?

Doctor McCollum: A practicing physician in New York, yes.

Mr. Jackman: And he has a large hospital of children there upon which the result of—I do not want to use the word experiments —

Doctor McCollum: That is what he did, and kept them on it until he produced it.

Mr. Jackman: I notice you make a statement in your recent work, page 252, that skimmed milk contains the vitamine A, so much so that rats fed 3 per cent of butter fat and 10 per cent of skimmed milk powder both maintained growth to about the same extent.

Doctor McCollum: That is that old observation which has pursued me so long; that is the one I commented on a while ago.

Mr. Jackman: All right. It is like Banquo's ghost.

Doctor McCollum: Yes.

Mr. Jackman: It is a fact, is it not, that cod liver oil contains probably 100 per cent more of vitamine A than butter fat?

Doctor McCollum: I would not grant that figure as at all correct.

Mr. Jackman: Well, a large amount more.

Doctor McCollum: Very considerably more; certainly a number of times more, but that statement I believe to be exaggerated.

Mr. Jackman: And there is no way of telling how much except by these relative animal experiments?

Doctor McCollum: We have the technique now so I think in a little time we will know, but at the present time it is not known with accuracy.

Mr. Jackman: Butter fat administered to animals deprived of a sufficient amount of calcium does not protect from rickets, does it?

Doctor McCollum: Read that again.

Mr. Jackman: Butter fat administered to animals deprived of a sufficient amount of calcium does not protect from rickets, does it?

Doctor McCollum: Butter fat will not protect from rickets provided the deficiency of calcium is sufficiently great.

Mr. Jackman: And a starvation on vitamine A alone does not produce rickets?

Doctor McCollum: No; that does not produce rickets.

Mr. Jackman: I understand you to say at the present time that your view is there are three factors in the pedology

of rickets, phosphorus and calcium content, and this so-called antirachitic substance?

Doctor McCollum: Yes.

Mr. Jackman: It has been stated, has it not, that this vitamine D is present in coconut fat.

Doctor McCollum: There is a small amount of it in coconut fat.

Mr. Jackman: And rickets, then, is not a deficiency disease, such as beriberi?

Doctor McCollum: It is of a different type; yes.

Mr. Jackman: And you take the view now, as I understand it, that the ratio between the concentration of calcium and phosphorus is of greater importance than the amount of vitamine contained?

Doctor McCollum: There is no question about that.

Mr. Jackman: Patent flour is one of the most efficient foods that enters into the human diet, is it not?

Doctor McCollum: It is.

Mr. Jackman: I think you also make the statement in this recent work of yours, on page 318, that the modern practice of modifying milk for infant feeding represents one of the most gigantic and tragic examples of persistent blundering of which man is guilty?

Doctor McCollum: I think Doctor Marriott's quotation yesterday and Doctor Brennemann's assertion that so nearly all children develop rickets would bear out that statement—that it was none too strong.

Mr. Jackman: That statement I read from your book is correct, is it not?

Doctor McCollum: That is essentially what I said; yes, sir.

Mr. Jackman: Now, this poor-teeth proposition is due largely to lack of calcium deposits in the diet, is it not?

Doctor McCollum: I am not ready to make any very extended discussion of that at the present time. We have been collecting data on this for some years, and we have an enormous amount, but it must be worked up in order to be intelligible.

Mr. Jackman: But you would not want to be understood as saying that poor teeth are due to a deficiency of vitamine A, would you?

Doctor McCollum: No; not solely so.

Mr. Jackman: Thank you very kindly. I am sorry to have worried the committee and you.

Doctor McCollum: You haven't worried me.

Mr. Bryan: May I ask one or two questions?

Senator McKinley: Yes, sir.

Mr. Bryan: Doctor, you and Mr. Jackman seem to agree on nearly everything he has discussed in the course of his cross-examination. I would like to ask you whether you desire to comment on any facts brought out in that cross-examination with relation to the policy embodied in the passage of the Voigt bill?

Doctor McCollum: The only comment I would make upon that would really be a reiteration of a few words which I have already said, which, I think, will stand repetition. I am not going into anything at length, but obviously there is something wrong in our procedure of bringing up children and feeding adults. You only have to look at them and take the word of your own witnesses here to see that fact and that we must do something about it.

The physicians who have appeared here have not told us what that is that we must do. I am telling you what I honestly believe to be the solution of this problem—that it is the education of the public to a certain type of diet.

[fol. 569] Now, I have listened here to this assertion that the amount of Hebe and other filled milks which are on the market now is so small in proportion to the total amount that, just because this business is a little fellow if for no other reason, we ought not to be rough on it. Perhaps I will repeat.

We have been told here this is a little business in proportion to the total milk consumption and canned-milk consumption, but when I listened to our economic friend tell us this morning the possibilities of increasing this business of 1,500 per cent then I am more fearful than ever that this is a matter which will put in jeopardy the family development in the homes of this country.

This is an important matter. We do not want to get a diet that is somewhere near right. We want to get it as nearly optimum as we can get it. I may be all wrong about this, but nobody has shown me where I am wrong yet. I feel quite confident to speak on this subject; and while our friends, the clinicians—again I want to pay tribute to them—they are a great group of men. The medical

profession have the highest ethical standards; they themselves have made those ethical standards, and I would not say a word against them except I think they are in error, and wherever one finds error he should attempt to correct that error. With the kindliest spirit, therefore, toward those men, I correct them on a matter I feel I am competent to speak on.

Mr. Jackman: Pardon me. I would like to ask you in that connection just one or two questions, if the committee will bear with me.

If I understand you correctly, there is just the same reason for including in the prohibition in this Voigt bill, which prohibits only those compounds of skimmed milk and vegetable fat which are in the semblance of milk, the product known as skimmed milk itself—evaporated skimmed milk—which is on the market as there is for prohibiting Hebe. It would be exactly the same thing.

Doctor McCollum: You mean canned skimmed milk?

Mr. Jackman: Yes.

Doctor McCollum: I think that would be a great mistake—to sell canned skimmed milk in family-size packages. I do not believe in it.

Mr. Jackman: And should not the sale of sweetened skimmed milk be equally prohibited in family-size packages?

Doctor McCollum: I think so; yes.

Mr. Jackman: And should not, according to you, the sale of this sweetened condensed milk be equally prohibited?

Doctor McCollum: The whole milk?

Mr. Jackman: Yes.

Doctor McCollum: That is a question on which I would pause a moment. Admitting its shortcomings—and I am willing to admit its shortcomings—I think that canned milk has a place in the market which, however, could probably be taken, and probably will be taken, in the course of time by milk powders.

We must have milk in a nonperishable form for certain parts of the world, and I understand it to be the case that heretofore it has been impossible to make milk powders economically on a scale——

Mr. Jackman: You do not understand me, I think. I am speaking not of the evaporated milk, that comes in a can, but I am speaking of the sweetened condensed milk, where

you have 42 per cent cane sugar, which the doctors say is deleterious to babies.

Doctor McCollum: I would answer your question in the affirmative at once were it not for this one question, that if we forbid the canning of whole milk, sweetened or unsweetened, I understand that a great deal of milk produced in certain districts where the supply is too small to make any butter could not be otherwise marketed in unperishable form.

Mr. Jackman: Either you do not understand me or I do not understand you. I am speaking now of the sweetened condensed milk, the stuff like this Borden's Eagle brand.

Doctor McCollum: Yes.

Mr. Jackman: The testimony here shows very conclusively that that is dangerous to babies.

Doctor McCollum: Yes.

Mr. Jackman: That also ought to be prohibited.

Doctor McCollum: It would be well if it could be prohibited as a baby food. I will grant you that it may have a use ~~in a mining~~ camp or lumber camp or some place for adults, and may be better than not having any milk at all.

Mr. Jackman: But where taken as a baby food?

Doctor McCollum: We condemn that as baby food.

Mr. Jackman: Just as bad as Hebe?

Doctor McCollum: No; I would not say just as bad as Hebe. It is not in the same class of badness as Hebe for a baby food.

Mr. Jackman: You and I will not discuss that question, because the testimony here is quite positive from the clinicians who treat the babies that it is worse.

Now, how about these preparations where they have attempted to get out from underneath the provisions of this law by adding a little coloring to it and advertising it for children, like this malted milk—I mean this chocolate flavored—and advertising it for children?

Doctor McCollum: Sold as a milk substitute?

Mr. Jackman: Used with water for children. [Handing advertisement to Doctor McCollum.] Read the directions on the can, if you want to.

Doctor McCollum: That is not very good business, perhaps.

Mr. Jackman: You would equally condemn that, would you not?

Doctor McCollum: Let me look at the can a moment. That is not a substitute for milk for children?

Mr. Jackman: No; it is not fit for milk for children. It has not any more vitamine A than Hebe has, has it?

Doctor McCollum: It may be a suitable component of a diet, provided it does not interfere with the planning of a satisfactory food. That I admit about Hebe.

Mr. Jackman: Precisely. And what I am getting at is, if Hebe is barred, that sort of product ought to be barred for children.

Doctor McCollum: If it is recommended for young children in place of milk then it should not be sold.

Mr. Jackman: Hebe is not recommended for young children.

Doctor McCollum: At present it is not; no.

Mr. Jackman: This brochure has been put on for over two years now. Have you ever seen Hebe fed to babies?

Doctor McCollum: No.

Mr. Jackman: Never have known of a case, have you?

Doctor McCollum: I have heard of cases.

Mr. Jackman: I mean of your own knowledge.

Doctor McCollum: No.

Mr. Jackman: All you have heard of are some general statements?

Doctor McCollum: I have heard statements in some legislative committees, but never outside.

Mr. Jackman: Statements made by the proponents of this bill?

Doctor McCollum: Yes.

Mr. Jackman: But have you ever heard the name of a baby that this had been fed to?

Doctor McCollum: I think I heard the name; yes.

Senator McKinley: Is not that repetition?

Mr. Jackman: Except this, that we do not know of a single instance.

Senator McKinley: He does not either.

Mr. Jackman: That is all.

Senator McKinley: Doctor, I have been very much impressed with your testimony before and to-day, and you have made a strong impression on me, and I think on the other members of the committee with reference to vitamine A and in connection with milk. I am rather strong on figures. That is about all I know, and I know nothing about chemistry.

We will say there are two 1 pound cans that, as I understand, is the way it is sold—either of condensed milk or this Hebe, which I never heard of until we were asked to come in here. As I gather from the questioning to-day there are, we will say, ten-tenths of vitamine A in whole milk as it comes from the cow. There are perhaps five-tenths in the skimmed milk when the butter fat is extracted. So if we had a pound can there would be five-tenths, we will say. Now, you had a can of condensed milk which is made up, we will say, of 60 per cent of milk and 40 per cent of sugar, would there be six-tenths of vitamine A in this can?

Doctor McCollum: If I understand you correctly that would be sufficiently accurate for the purpose of illustration of the principle.

Senator McKinley: I thank you. That is all.

Senator Ladd: I would like to ask you a question. We have discussed here a great deal to-day the question of the vitamine, as we have before. Is that the only essential difference as a child's food between the cow's milk and the preparation like Hebe?

[fol. 570]. Doctor McCollum: No; there are two factors that would enter in there. One is its digestibility as illustrated by the case of saponification of butter fat compared with the other fats.

Leftovitch and Glickman in their textbook on fats state that either the body fats of animals or vegetable fats saponify much more rapidly than the butter fats, a matter I have had repeated occasions to verify.

Senator Kendrick: Do you mean by that they are less digestible?

Doctor McCollum: Not that they are less digestible, perhaps, in the vigorous adult human digestive tract, but it may be true in the delicate digestive tract of the infant. By laboratory tests it is very easy to demonstrate that the butter fat goes into soap and water under proper conditions, we will say at perhaps double the rate under identical conditions as coconut oil or other vegetable fat, or lard or tallow.

Senator Ladd: I want to read this telegram of which I am in receipt, and which will later be introduced, and ask you whether you agree or disagree with this statement here:

"Filled milk lacks some of the essential nutritive qualities of natural milk. There is a biological function of butter fat which can not be supplied by any vegetable fat in combination with skimmed milk. Children that may be fed largely on filled milk would be deprived of some of the essential nutrients to such a degree that their growth and development and their health would be seriously impaired. For this reason alone the sale of filled milk should either be prohibited or so regulated that such fake milk would not be used where its consumption would do the serious harm referred to above."

Doctor McCollum: I would subscribe to that without qualification.

Senator Ladd: I wanted to know what your view was on that, as this telegram together with a couple of letters has come in, which I will later introduce.

Senator McKinley: Do you want any more?

Senator Ladd: No.

Senator McKinley: We are very much obliged to you, Doctor.

Mr. Holman: Doctor Gittings has to catch a 4.30 train, and we would like to put him on in rebuttal of some of the testimony that has been given.

Statement of Dr. John Claxton Gittings, Professor of Pediatrics, University of Pennsylvania

Mr. Holman: Will you state your connection, Doctor?

Doctor Gittings: Professor of pediatrics in the graduate school of medicine of the University of Pennsylvania.

In this long session it seems to me that we have wandered very far afield, Mr. Chairman. I want to report what impressed me as the essential point about this discussion.

Is coconut oil an inferior food product, and, if so, will the laity purchase it in the belief that it is just as good as evaporated milk?

I am not discussing condensed milk or cocoa malted milk or anything else, as far as I can see the point in the Voigt bill.

The manufacturers of one of the makes of this filled milk, as I understand it, place on the label that it is not to be used for babies. In my original testimony I also made the premise that all these milks were the same and, therefore, what applies to one applies to all.

It seems to me the manufacturers admit a very definite dietary deficiency when they place this on the label. It corresponds to what I think, and, as I say, they apparently admit it.

With regard to whether or not the milk is used, the thing is comparatively new. Evaporated milk has been on the market for years and it, of course, requires time for physicians at least to get positive first hand knowledge as to how much it is being used. I confess I do not have it. But to my mind the mere figures of the growth of the use of filled milk suggests very strongly it is being used, and some of it at least must be in substitution.

With some of the statements of Doctor Brennemann I would like to take exception though, of course, I agree with most that he said, particularly with regard to the fact that skimmed milk bolstered up by carbohydrates can produce satisfactory nutrition.

As I remember his testimony, it was to the effect that he had fed children this way with very satisfactory nutritional results. My own experience of 25 years of infant feeding has been that there is no more sure way of producing rickets than by feeding skimmed milk deprived of fat and bolstered up with carbohydrates.

In the last volume of Holt and Howland, the leading standard text book, or certainly one of the leading text books, this statement occurs:

"The diet of children who develop rickets upon artificial feeding is most frequently deficient in fat and often at the same time in protein, and it is apt to contain an excess of carbohydrates."

Which is practically the statement I have just made.

Another statement Doctor Brennemann made—I think it has been referred to—in which he inferred that rickets developed on all diets. He did not, I think, make perfectly plain what a great difference there is in the proportion of cases of rickets that develop on the different diets. Certainly the breast-fed baby is the best product of all, and in my experience the child who gets a fair proportion, an average percentage, of cow's milk fat, is the next least likely to develop rickets. As soon as you reduce your fat percentage you get a definite increase in the proportion of your cases of rickets.

Some years ago we first discovered how much harm cow's milk fat did in certain types of infants. We were feeding too much fat and infants developed fat indigestion. The pendulum then swung over to the feeding of skimmed milk cutting our fats and as is the rule, it swung too far, and for the last four or five years physicians have been trying to guard against too much fat in the diet of babies because of danger of rickets.

Many physicians followed the reasoning that if cutting out the fat would cure fat indigestion, then by applying the principle as a preventive, if it cured indigestion, it would prevent it by cutting out the fat in the first place, and rickets continued to increase with the low fat feeding of the last four or five years.

I want to emphasize that through my years of experience the one most important practical fact has been that the child who, for any reason, is deprived of this cow's milk fat, the artificially fed child is the more apt to develop rickets.

The question of the present status of the anti-rachitic vitamine, of course, is a little difficult to argue about, but it certainly suggests itself very strongly, that there is a vitaminelike substance which will prevent rickets when we consider what cod liver oil will do. Cod liver oil empirically is known for years as the best food for the rachitic child and is now being used as a preventative of rickets. The amount of food in a teaspoonful of cod liver oil a day is practically negligible. Therefore, the substance in it which acts as an antirachitic substance must be extremely complicated and of a nature which suggests its vitaminelike characteristics.

This S. M. A. has been mentioned very often. They put it out in both an evaporated form and a dried form. It is a dried-milk product made from skimmed milk to which has been added other fats—I believe coconut oil and tallow, with a small amount of cod-liver oil. Doctor Gestenberger himself, I am sure, would be the first one to admit that without that cod-liver oil added the food is an unsatisfactory nutriment. That is one of the most direct evidences we have—practical evidences—that coconut oil is not a substitute for butter fat, because it is the cod-liver oil which saves the S. M. A.

I am familiar with Doctor Ladd's work; at least I have read the article where he used olive oil in place of butter

fat. That was work done with babies who were suffering from fat indigestion, and his conclusions, as I recall them, were that the olive oil emulsified over a period of weeks worked very satisfactory in cases where they could not digest butter fat.

On the question of vegetable oil being used in competition with butter fat, I think that falls to the ground. It certainly does not prove they are equal in nutritive value.

Senator Ladd: In order that I shall not be mixed up in this, you refer to Doctor Ladd of Boston?

Doctor Gittings: Doctor Ladd of Boston. The whole question, as it appeals to me, is bound up with the economic factor of the type of individual that buys canned milk. No one will, I think, admit that any form of evaporated or canned milk is the equal of good pure cow's milk. Evaporated milk was manufactured because of the extreme difficulty of keeping milk. It was a necessity of commerce, and of course was a very valuable procedure, because it placed whole milk, with all its ingredients, in reach of people who otherwise would not get any. It is the poor, however, that for the most part use it, so far [fol. 571] as my experience is concerned. People who do not, for one reason or another, chiefly economic, have the facilities for buying milk or for keeping it.

Certainly, so far as my specialty is concerned, in dealing with children, I am confident that none of my dispensary patients who are able to afford fresh milk and also able to afford the ice to keep it have been bothered with condensed milk. Certainly they did not use it once they were properly instructed.

So, as I see this filled milk, it is a substitute for a substitute. The evaporated milk was a necessary substitute; the latter, as I see it, is entirely unnecessary.

From my standpoint as a pediatrician, the mother who buys evaporated milk is a type with which I am very familiar, and I am equally sure can be persuaded to take a substitute which resembles it in all essential respects. If that substitute happens to be a cent or two a can cheaper I think it is inevitable that she will buy it.

I also call attention to a psychic condition which is existent nowadays which might be described as an insistent urge to try something new. I think we are in the midst of various demonstrations of that, and certainly the housewife

and the mother feeding the infant would not hesitate to buy something which, as I say, so closely resembles the evaporated milk.

I understand that on one of the cans the statement is made it is not to be fed to children, but I am not sure that the statement occurs on the others. Nevertheless I am perfectly confident that the statement on the can would not deter a very considerable percentage of people who feed evaporated milk.

There were a great many statements made to which some exception could be taken, but to my mind they invite questions which are not especially pertinent to this point that we have in mind, questions with regard to the digestibility of cow's milk etc., the question of the emulsification of fats, etc.

I think Doctor McCollum has told us so much of that it is hardly necessary for me to say anything more. I was interested to know, however, that the farmers attach such a low value to the nutritive value of skimmed milk. It corroborates my own belief so far as children are concerned.

I think that is all I need say.

Mr. Bryan: May I ask the Doctor one question?

Senator McKinley: Certainly.

Mr. Bryan: Doctor, the health and well being of a nursing baby are affected to some extent at least, are they not, by the condition that the mother is in—her children's health—her diet, in other words?

Doctor Gittings: Yes; chiefly through the milk, of course.

Mr. Bryan: Doctor McCollum has stated for that reason the nursing mother's diet should be particularly safeguarded. Do you agree with that statement?

Doctor Gittings: Perfectly.

Mr. Bryan: It was testified to here yesterday in substance that among the foreign element at least of our population nearly 90 per cent of the babies are breast fed often up until their second birthday. It was further testified that Hebe is very largely used in homes where such babies are, for cooking and baking, making soups, and in other forms. Will you state what effect that extensive use of Hebe by the inmates of the home, including the nursing mother, is likely to have upon the infants who take the milk from the mother so fed?

Doctor Gittings: As I understand it, a deficiency of vitamine A in the diet of the mother will unquestionably

weaken the vitamine content of her milk. Among that type of individuals the vitamine-A-containing foods in their natural diet is already reduced often to a very low ebb, so that although you may say that in a mixed diet the use of Hebe would be negligible in the type of diet which many of these people have you could not afford to cut off any of the vital principle-containing foods, so that I would say that the tendency would be, by the substitution of Hebe for evaporated milk, to reduce the vitamine content of the mother's milk unless she was on a very ample diet of other vitamine-containing foods.

Mr. Bryan: That is all.

Mr. Jackman: Doctor, did you ever know of an infant being fed Hebe or any other milk compound?

Doctor Gittings: I do not have any personal knowledge of it.

Mr. Jackman: You never have had any experience of that kind?

Doctor Gittings: Because I have not been doing dispensary work for the last four or five years and do not come in intimate contact with the mothers, therefore.

Mr. Jackman: No case of that kind has ever been reported to you, to your knowledge?

Doctor Gittings: No.

Mr. Jackman: Or individually in your practice?

Doctor Gittings: No; I have made inquiries, however.

Mr. Jackman: So what statements you are making you are making as conclusions, not from actual experience with the product?

Doctor Gittings: Not from actual experience; no.

Mr. Jackman: You spoke about Doctor Holt as being a standard authority. Did you refer to Dr. Emmet Holt?

Doctor Gittings: Yes.

Mr. Jackman: He is recognized as a standard authority, I think you say?

Doctor Gittings: Yes; he is one of the leading pediatricians in the country.

Mr. Jackman: Let me read you from a paper by Doctor Holt with reference to Hebe sworn to the 25th day of July, 1922:

"Is it possible that such a product as milk compound would be positively injurious to infants, if it were used by

an ignorant mother as a substitute for fresh milk, even though the label advises against such use?

"The product contains only the constituents of cow's milk, skimmed and sterilized, and vegetable fat, neither of which could harm infants even though used for considerable periods—i. e., many weeks. My own experience accords with that of others that vegetable fats are valuable foods for infants; that they are in most cases absorbed quite as well as the fats of milk and that their effect upon the weight of a child, and the absorption of mineral salts, particularly lime salts, is practically the same as that of milk fats."

Would you agree with that or not?

Doctor Gittings: I have not any experimental data on that, but I would be disposed to ask first, before answering, how long that experience had lasted. As I said before, it is very difficult to draw conclusions from hospital patients. They are in the hospital three, four, five or six weeks. Now, the nutritional damage done by these deficiencies, as I understand it, and as I can readily understand, do not appear in as short a time as that. The experimental animals are the only ones that give us results that we can see develop from day to day. The human subject takes much longer.

Now, if that statement of Doctor Holt's refers to hospital patients I should say that it was problematical. Personally, I have seen children fed on substitutes for butter fat and they have done fairly well for short periods of time, but I question very much if over long periods of time you could substitute vegetable oils for butter fat. I have never attempted to do it. I would be afraid to do it.

Mr. Jackman: Do you know a doctor by the name of J. P. M. Griffiths, of Philadelphia?

Doctor Gittings: Very well.

Mr. Jackman: Referred to as one of the most eminent pediatricians in the city of Philadelphia?

Doctor Gittings: Yes, sir.

Mr. Jackman: Is he a professor in the medical school of the University?

Doctor Gittings: He is a professor in the undergraduate school.

Mr. Jackman: You have not seen his statement with reference to this which is incorporated in the House record, have you?

Doctor Gittings: No; I have not.

Mr. Jackman: And are not familiar with the fact he disagrees with you in that statement?

Doctor Gittings: I have not seen it. Therefore I do not know what is in it.

Mr. Jackman: Did you personally ever see a case of xerophthalmia in a child?

Doctor Gittings: No.

Mr. Jackman: Have you had any experience in the feeding of this sweetened condensed milk like Borden's Eagle brand?

Doctor Gittings: Yes.

Mr. Jackman: Do you recommend that as a baby food?

Doctor Gittings: No.

Mr. Jackman: Do you agree with Doctor Brennemann's statement and Doctor Marriott's and others with reference to that?

Doctor Gittings: That it is——

Mr. Jackman: Deleterious?

Doctor Gittings: Inadvisable and apt to be deleterious.

Senator McKinley: We will stand adjourned until 10.30 tomorrow morning.

(Whereupon, at 4.20 o'clock p. m., the committee adjourned until to-morrow, Friday, August 4, 1922, at 10.30 o'clock a. m.)

Friday, August 4, 1922

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON AGRICULTURE AND FORESTRY,
Washington, D. C.

The subcommittee met, pursuant to adjournment, at 10.30 o'clock a. m., in room 224, Senate Office Building, Senator William B. McKinley presiding.

Present: Senators McKinley, Ladd, and Kendrick.

Senator McKinley: The committee will come to order.

Mr. Jackman: We have a couple more witnesses, if the committee please.

Senator McKinley: Mr. Miller wanted to be heard at this time, in order to get away.

Statement of Mr. John B. Miller, Dairymen's League Co-operative Association, Utica, N. Y.

Mr. Miller: My name is John B. Miller. My address, for the purposes of this hearing, will be in care Dairymen's League Cooperative Association, 333 Lafayette Street, Utica, N. Y.; home office in Susquehanna, Pa.

For many years I have been engaged in a small way and now in a fairly large way in the cooperative milk-marketing movement. For nearly six years I have been a director of the Dairymen's League, and now, by reorganization, the Dairymen's League Cooperative Association, having 73,000 members, covering the dairy section of the State of New York, northern tier of counties of Pennsylvania, the northern part of New Jersey, and a fringe on the edge of Vermont, Massachusetts, and Connecticut.

Our association for the month of June of this year, which is the last month for which the accounts have been tabulated, sold milk—I thought I had the statement here, but I guess I have mislaid it, but it sold something over 400,000,000 pounds, part of that to fluid-milk dealers who distribute the fluid milk in the city, part of it to condensers and evaporators and those who evaporate milk, and part of it processed through the plants owned by these farmers' organizations, of which there are about 100, some of those being milk-shipping plants, some sever or eight of them producing condensed and evaporated milk. As vice president of that organization I have been in touch with the work of that organization from the beginning. Also I have engaged to some extent in national investigations as a dirgetor of the National Milk Producers' Federation and as a member of the National Committee of Eleven appointed by the joint action of the American Farm Bureau Federation and the National Milk Producers' Federation, the purpose of the work of that committee being to investigate the marketing conditions of milk, nation wide, and we took up our work the 1st day of October.

Mr. Chairman, I appreciate the courtesy of the gentlemen representing the manufacture of these compounds in suspending the introduction of their testimony to permit me to make a short statement, since my arrangements compel me to leave the city at noon. In making this statement it will be of some interest to the committee to know the opportunties that I have had for observation bearing directly on the questions here involved, namely, the economic pressure that the sale of these compounds is bringing on the dairy interests of the country.

Before presenting the facts I wish to call to the committee's attention, I feel that we would be derelict in duty if we did not call to the attention of the committee very sharply one aspect which in our minds is a sinister aspect that has developed at this hearing.

[fol. 573] Last Tuesday morning a highly reputable member of the bar of the District of Columbia hurled at the Milk Producers' Federation and the officers of the Borden Co. an accusation of crime, a very grave accusation. Mr. Chairman, that accusation brands somebody with dishonor. If true, it brands the officers of the National Milk Producers' Federation and the officers of the Borden Co. with dishonor; if dishonor, if untrue, it brands with dishonor the men who instructed this able attorney to make that statement. We have waited patiently for evidence to be produced to substantiate that charge; all of Tuesday, no evidence; all of Wednesday, no evidence; all of Thursday, no evidence; and Mr. Jackson has now stated that they have two more witnesses, so that it is obvious that they intend to close this hearing without attempting to prove that conspiracy. Now, we request, Mr. Chairman, and so far as we have a right to demand, we demand that they either prove that charge or retract it, and I am sure the estimable gentleman who spoke for the men who originated that charge will join with us in demanding that his clients either prove that accusation or retract it, else will he be in somewhat an unenviable position.

But he went further than that. He stated that the same evidence that would be produced here would be produced before the Federal Trade Commission, even going so far as to seem to forecast what the action of the Federal Trade Commission would be by stating that the Federal Trade Commission would report it to the Department of Justice for grand jury investigation.

Mr. Chairman, representing the men so assailed, here and now we invite them to take that action; here and now we challenge them to take such action; here and now we predict that they will not take such action, and that they will not take it for reasons which their own consciences dictate to them. At this time I will not discuss that factor further, but less than this we could not say without being cravens.

As a basis of some remarks that I will make to you, may I again refresh the recollection of the learned gentlemen representing these compounds here, and, incidentally, to prove to the committee that these milk compounds are being sold and advertised for sale as evaporated milk. I have in my hand an issue of the Worcester, Mass., Telegram dated December 29, 1921, and in the lower left-hand corner of the second page appears this advertisement over the signature of the Worcester market. It is an advertisement of different kinds of commodities. The first heading is bread-flour, which I will not read. The second heading, in capital letters, is M-I-L-K, which I think you gentlemen will concede does not spell coconut-oil compound, but does spell milk. They say, under the head "Milk," "Sales continued on Carolene evaporated milk per can 9 cents, 3 for 25 cents; per dozen, 95 cents; per case, 4 dozen, $3.60," and Carolene is one of the coconut-oil compounds sought by this bill to be outlawed from interstate commerce.

Another factor along that line, showing the uses. I have in my hand a letter from Mr. Pryke, who is the commissioner of farms and markets of the State of New York. One bureau of that department is the department of agriculture, of which Mr. George Hogue is the head, and his official title is commissioner of agriculture. I mention that because there are three communications here; first, a letter from Mr. Pryke, the commissioner of farms and markets, addressed to Mr. Holman, the Washington secretary of the National Milk Producers' Federation; second, a telegram of inquiry from Mr. Holman to Commissioner Pryke; and, third, a reply to that telegram made by Mr. Hogue, the commissioner of agriculture. The letter reads as follows. It is dated July 28, 1922, and is addressed to Mr. Charles W. Holman, secretary National Milk Producers' Federation, 1731 I Street NW., Washington, D. C.:

"DEAR SIR: In response to your request I beg to advise that recent investigations of this department have brought

to light that cocoanut oil is being shipped in considerable quantities to New York State, presumably to be used in connection with the manufacture of what is generally called 'filled milk.' This department has taken numerous samples of a product being sold on the markets of this State as evaporated milk. The analyses in more than 50 cases show that the fat is not milk fat. Already $3,000 has been paid into this department in penalties by one distributor, and other cases are now in course of preparation. Because of the fact that the investigations of the department are continuing, we do not feel it expedient to disclose at this time the identity of the manufacturer or of the concerns offering this product for sale."

Replying to that letter, Mr. Holman wired Commissioner Pryke as follows, under date of July 31:

"Please wire description of contents of compound referred to your letter 28th where reference is made to 50 violations."

The reply to that telegram from Commissioner of Agriculture Hogue is as follows, addressed to Mr. Holman:

"Your telegram 31st received. The product referred to was being sold as and for evaporated milk and had every appearance of the same. The chemist's certificate of analysis showed the product to be skimmed milk and coconut oil."

We would offer these letters and telegrams in evidence.

(The letter and telegrams referred to were filed with the committee.)

Mr. Miller: Can I just clear up one uncertainty which was left also as to the attitude of the dairymen of the country to this bill?

The distinguished gentleman representing the manufacturers of this product read into the record a part of an article from Hoard's Dairyman, from which they would argue that Hoard's Dairyman was against this bill, and interpreting that as meaning that there is a division of thought among dairymen. That is not so. Personally I believe that I have taken part in every discussion of any national meeting of dairymen that has taken place on this subject since it first became a subject of public discussion. They were always a unit as to the necessity of prohibition of this traffic. There was in the beginning a division of

opinion as to the best method of prohibiting it; one line of thought being that it could better be prohibited by taxing it out of existence; the other line of thought being that it should be by direct prohibitory legislation like the bill pending now before this committee.

At a meeting at which Federal legislation was discussed in the first week in July last year, at Buffalo, the subject was thoroughly discussed by a large meeting of representative farm organizations, not only dairymen, but representing the National Grange, and, I think, some of the farm bureaus. At that time it was not definitely determined just which bill the dairymen thought would be most effective. That doubtless was caused by the reason that it was argued by those who favored taxation measures that a prohibitory measure was not constitutional, and the attorneys present there were not then prepared to give an opinion that a prohibitory law would be constitutional. Before the next meeting of officers and leaders of these dairy organizations, which took place in October at St. Paul, the question of the constitutionality of the law was thoroughly investigated, and the dairymen were advised and now have no doubt as to the constitutionality of the bill. I will not discuss that. It will probably be discussed by Mr. Bryan.

From that time on, at the meeting at St. Paul, a large representative gathering—that was during the dairy show—there was no division of thought. In attendance at that meeting was the National Committee of Eleven which I have mentioned, appointed by the Farm Bureau and the National Milk Producers' Federation. There were a large number of dairymen and officials of dairymen's organization from all over the country, from the Pacific coast to Boston. After discussing that in all of its angles for a half day, the final conclusion was unanimous that a prohibitory law was the only law that would be effective.

Something has been said here about the position of the Holstein-Friesian Association. The Holstein-Friesian Association has never gone on record as being opposed to the prohibition of this traffic. They did adopt at first a resolution favoring the taxation measure, to prohibit it by taxation, but later, learning the consensus and the unanimity of thought of the men who are actually marketing farmers' milk, they changed their position and now, by resolution recently adopted, are in support of the bill.

One of the strongest arguments to be made against legislation of the character here in issue is that the production of these compounds conserves and saves skimmed milk that would otherwise be wasted. Now, if that be a fact, it is a very material fact to be considered by the committee, for I join very heartily with the expression that has been made here as to the possible and probable inadequacy of our future food supply. Does it? Does it save one quart of skimmed milk? Do they put into these compounds a single pint of skimmed milk that would otherwise be wasted? The answer is no. They simply create the skimmed milk, create a large addition to the supply of skimmed milk in the country, and that excess supply which they create they then utilize in manufacturing this product, and they call that conservation of the dairy interests.

The questions asked by Senator Kendrick of those witnesses testifying upon that subject, supplemented, I think, by one asked by myself, developed the fact that the amount [fol. 574] of skimmed milk that they bought, the amount of skimmed milk from other plants, was so small as to be negligible, and the witness gave the reason: Because that skimmed milk, within an hour after its separation, enters into this heating process in order that it may be sufficiently pasteurized.

Senator McKinley: I wanted to ask you one question. Perhaps this is not the time. But is it the idea of the dairy interests that the condensation of skimmed milk is detrimental to the dairy interests?

Mr. Miller: Oh, yes.

Senator McKinley: There are quite a number of these skimmed milks?

Mr. Miller: If so condensed and sold under such conditions that consumers buy them in place of whole milk, undoubtedly it is.

Senator McKinley: This brand I hold in my hand is labeled "skimmed milk." Is it the opinion of the dairy interests that it is objectionable to put that up and sell it?

Mr. Miller: Undoubtedly it would be objectionable if the sales of that particular form of skimmed milk reached such proportions by reason of people thinking that they were buying whole milk, as to make it dangerous; but the great factor that is tending to cripple the dairy industry, so far as it is affected by the condensation or evaporation of skimmed milk, is these compounds to which they have added

other fats. We have not yet found in our marketing of milk that the sale of skimmed milk in small family size packages has yet reached such a size as to seriously interfere with the marketing of our milk. These compounds have.

Senator McKinley: Well, if there was a large sale of these skimmed milks, such as half a dozen of these cans are here, would your dairy interests then oppose the sale of the skimmed milk?

Mr. Miller: If that large sale came about by reason of its being advertised all——

Senator McKinley: Oh, well, but here is the question. It says on here that it is skimmed milk. You can read it from that distance.

Mr. Miller: May I ask if that is sweetened or unsweetened?

Senator McKinley: This is the Kyme brand of sweetened skimmed milk.

Let me just say this. This committee on Agriculture of the Senate is made up of men who are favorable to the farming interests. That is the reason they are on the committee. They got there because they wanted to be there. Now, they largely want to follow out what the dairymen want done and what the farmers want done, and I am asking you this question for information. Do you want to shut off skimmed milk from the market?

Mr. Miller: I have not heard the dairymen take any organized action, and any opinion given would be an individual opinion, and that would be this, that at present, although the sale, as Mr. Bryan informs me, of condensed skimmed milk, is not prohibited by the laws of some of the States, as Ohio, as has already been discussed here, so far as my own experience and observation goes, the sale of that particular product, coming into competition with our whole milk, has not reached such size as to be anywhere near the menace to the dairying industry as are the compounds we are here discussing.

Senator McKinley: But if there was a large sale of condensed skimmed milk, your individual feeling is, for the dairy interests, that we ought to prohibit it by law?

Mr. Miller: Oh, I would think so, because it is simply a by-product which necessarily crowds out the genuine product.

Senator McKinley: Well, it crowds out the butter fat.

Mr. Miller: Taking up again, Mr. Chairman, the question of whether in the manufacture of these compounds they are saving any skimmed milk. Now, I believe it is unnecessary to call to the attention of the committee, but possibly it may be well to put in the record, because sometimes these records are read [laughter]——

Senator McKinley: By whom?

Mr. Miller: I don't know.

That this skimmed-milk problem and the question asked by the very prominent gentleman, I think, from Illinois, Doctor Wilson. What shall we do with skimmed milk.

I will try to show briefly that the manufacture of these products is not an answer to that at all, because they do not take and put into these compounds any of the skimmed milk that would otherwise be and is now being wasted. Why? Let us divide this skimmed milk as follows: First, there is skimmed milk in the great dairy centers of the country, where the farmer never sells whole milk, but only the cream, keeping that skimmed milk on the farm. That skimmed milk is not wasted. It is fed on the farm. That is out of the question.

Second, there is another division of skimmed milk, gradually, year by year, growing less, but still a substantial factor in the problem where butter is made on the farm. That skimmed milk is fed on the farm, and it is not wasted.

The skimmed milk that is being wasted in this country is largely from factories in the areas that supply the cities with milk and that during some part of the year, during the short production period, the whole milk must be diverted to the city in order to give the people an adequate supply, but in the surplus period it must be converted into butter or to cream, skimming the milk in the factory. Now, why can not the farmers utilize that skimmed milk? The thought has been given here that the farmers do not appreciate the value of skimmed milk. They do; but there are two practical reasons why they can not use that skimmed milk. One of them is this: It is of no value to them unless they know that they can have it for a period of months, so as to start their calves and pigs to which it is to be fed. This milk being subject to diversion to the city at any time, and the fluid milk dealer who creates this skimmed milk being unable and refusing to give any assurance to the farmers that they can have it for any period of time, it is worth nothing to the

farmer, because if he started his calves and pigs he might be without his milk long before it is time for use.

The second reason is this: The skimmed milk of all the herds delivering milk to that creamery is put into one vat, the skimmed milk vat. Out of that the farmers, if they use it, take it. That has been found to be a great spreader of bovine tuberculosis and the other diseases affecting cattle, so that cautious dairymen will not take the risk of taking that skimmed milk home and feeding it. Some of the States, notably New York, have attempted to solve that problem by requiring that the skimmed milk sold back to the farmer shall be pasteurized not by the long half-hour process with a certain uniform degree of heat but by a quicker flash process, which heats it to a very high degree, but only for a moment, so that in the dairying operations it must be done very quickly if the farmers who bring in the milk can take back the skimmed milk. But that is not developing as satisfactorily as it was thought it would.

Those are the reasons.

How much of that skimmed milk ever reaches a single farmer, from which these products are made? These gentlemen have complete investigation. We invite them to file before the committee a certified statement of any place where they are buying that skimmed milk and converting it. All the skimmed milk that they use is the skimmed milk that they themselves create, and that skimmed milk can be conserved, it is so obvious, if it is evaporated in the whole milk form and both the skimmed milk and the butter fat sold to the ultimate consumer in the same can.

Senator Kendrick: Can you give us any definite information as to the relative prices of these products on the market to the consumer—that is, showing the difference between the cost of the whole condensed milk and the cost of this product to the ultimate consumer?

Mr. Miller: I would try to do that, Senator, because I can see that it is quite a material question. In fact, Senator, if we can actually reach the cost of these compounds, we have uncovered the African gentleman in this woodpile. There is no question about it.

Senator McKinley: Would it not be well in doing that to also show what the whole milk which you deliver to the retailer, or the consumer, costs in proportion?

Mr. Miller: In order to be accurate and not to depend entirely on memory, our association has actually prepared, by

the head of the research department, a general summary of economic conditions, which is laid before our board of directors monthly; and which discusses a wide range of economic conditions, and among them it gives the prices paid by condensing and evaporating milk companies throughout the United States and in the principal centers. The last one that I found here in Washington at the office was made up in May of this year, which was for the determination by us of the general price of milk, but is sufficiently accurate, I think, and sufficiently recent to be a fair comparison to make.

[fol. 575] I find that there is quite a wide variation in the prices paid by condensers in different sections of the country, as follows: In Pennsylvania, in the Sandy Lake-Saegerstown region—these are reduced to a 3 per cent basis, and I will add the average butter fat and will change these figures to include the butter fat.

Pennsylvania, the Sandy Lake-Saegeratown region, $1.43 per hundred pounds.

Ohio points, $1.52 to $1.82.

Senator Kendrick: This is for the whole milk?

Mr. Miller: For the whole milk delivered by the farmers to these condensing plants. That is what you wanted, Senator?

Senator Kendrick: Yes; I wanted to get an estimate of that price, or get those prices, and then to get information that would show the real difference between the cost of a can of this, we will say, adulterated product—that is the term that has been used—and the condensed milk; the can of condensed milk that is sold over the shelves right along beside it.

Mr. Miller: I think I can give you that information, Senator, that will be approximately correct.

Senator McKinley: What is it you want? The wholesale price?

Senator Kendrick: Well, the retail price, Senator.

Senator McKinley: Did they not testify that they have sold for just as much? That is the testimony that is already in. The testimony showed that a great many grocers sold it for just the same.

Mr. Bryon: Yes; in a great many instances.

Mr. Miller: In Michigan it ranges from $1.41 to $1.58 per hundred pounds of whole milk.

Senator McKinley: To a layman, you just double that, roughly, to make a quart? Is that the idea?

Mr. Miller: Halve it, roughly, to make a quart. It would be 100 pounds makes approximately 47 quarts.

Senator McKinley: If you paid $1.50 a hundred it would be approximately 3 cents a quart?

Mr. Miller: Approximately that, yes sir.

Mr. Jackman: It takes 110 pounds to make a case of evaporated milk, of the tall size cans, 48 to the case.

Mr. Miller: I will touch upon that a little later. First may I complete this record?

Illinois points. There, Senator, we strike a very low point; the lowest with the exception of Missouri on this list. There the price of whole milk is from $1.18 to $1.48 per 100 pounds.

Senator Kendrick: Does the amount of butter fat contained have any influence upon the price?

Mr. Miller: Yes, Senator; but this is assuming that the average butter fat content—for instance, if they buy 4 per cent milk they pay more. If they buy 3 per cent milk they pay less. But the average test throughout the country being in the vicinity of 3.7 or 3.8 I am making this illustration upon the 3.8 basis.

Senator Kendrick: That makes it clear.

Mr. Miller: Wisconsin points, from $1.35 to $1.78 per 100. From Missouri points we have only one price, $1.18.

Iowa points, from $1.61 to $1.88.

Now, this is per 100 pounds of the milk—of the whole milk, that condensers and evaporators and the manufacturers of these compounds pay the farmers for the milk which they purchase.

Now, what is the effect of that upon the cost of the residue of the skimmed milk, which these gentlemen pack and mix with coconut oil? Taking the market value of milk during the month when these prices would be effective, taking 92 score butter as being the test, which is the average test, some scoring lower and others higher, and assuming that they get 4,176 pounds of butter out of that 100 pounds of milk, the price that they would receive for that butter fat, deducting the expenses of making and marketing it, will pay for the whole milk they buy within about 15 to 17 cents per 100 pounds.

The gentleman to my left here says that that is not a fair statement. Now, I have found in this work that we always lose and never gain by making an unfair statement, but I

will now say that we are not going to make any accusation here and then run away from it.

Senator McKinley: Why, if they only pay 2 cents a quart and not over 3 cents a quart for milk wholesale, do we pay 12 to 15 cents?

Mr. Miller: That, Mr. Chairman, is a very, very important question, and we would like to know why, but we must ask the gentlemen on the other side of the table, some of whose companies are actualy delivering this milk, to explain that.

Mr. Jackman: We don't deliver any milk.

Mr. Miller: No; your company does not.

Mr. Jackman: And none of the manufacturers, so far as I know.

Mr. Miller: That may be so, but some of the condensing companies do so by their allied companies.

Senator McKinley: Do Borden's?

Mr. Miller: Borden's deliver it; yes.

Mr. Urion: One moment, if I may interrupt. That price is not only the price to the condensers and evaporators, I understand, but is also the price, is it not, to milk distributors and creameries?

Mr. Miller: I think that that is generally so throughout the country. It is not so in our particular case, because our prices for the farmers' milk we sell are classified according to the uses or the form in which they finally market it.

Mr. Urion: But generally that is true?

Mr. Miller: Generally, I believe that to be a correct statement; yes, sir.

The gentleman says that that is not a fair statement; that their receipts from butter pay their entire cost price of this milk up to within about 17 cents per hundred. I then invite him to lay before this committee certified—because they no doubt have certified public accountants examining their books—certified accounts, and lay them right before the committee, and we will take that as conclusive.

Senator McKinley: I was just wondering what this line of testimony has to do with this bill.

Senator Kendrick: May I say that my idea is asking the question as to the relative cost of these two products to the consumer, the man whose income is limited, and who is compelled to buy as economically as possible, was to determine as to whether or not, through that information, that

this by-product, we will call it, for the want of a better name, was serving a real economic use in the market.

Mr. Miller: Yes, sir.

Senator Kendrick: If it was enough cheaper to warrant the production of it as against the whole milk in concentrated form, that would seem to me to have a direct bearing on the situation.

Mr. Miller: My answer to that, Senator Kendrick, would be this.

Senator Kendrick: I may just add a word there. My assumption is that it is not as good a product.

Mr. Miller: Yes, sir.

Senator Kendrick: That was the thing that I thought perhaps we might accept. It is not as satisfactory, but sometimes we are compelled to buy things based upon the cost, oftentimes without being so particular about the quality, if they serve a useful purpose. In other words, to illustrate, I would think the man or woman would have something wrong with them who would actually prefer oleomargarine to butter, but if it is not detrimental to health and can be bought more cheaply, I don't know any reason why it should not be sold. Now, that was the object I had in wanting to find out about the relative cost of these products. I do not ask the witness to go into detail, if he could arrive at it more briefly.

Mr. Miller: Well, that is a branch of the subject that others have investigated, I think. I can give you in a sentence, I think, the result of this investigation. The price of these compounds to jobbers is $1.48 a case of 48 cans, less than the price of sweetened condensed milk.

Senator McKinley: $1.48?

Mr. Miller: $1.48 or 3½ cents a can that the jobber makes.

Senator McKinley: What is the price they pay?

Mr. Miller: I can not state.

Senator McKinley: That does not mean anything to us, you know, unless you state that.

Mr. Miller: I can not give that, because those prices fluctuate.

Senator McKinley: I would like to know whether they pay 3 cents a can or 7 cents a can.

Senator Kendrick: I asked for the retail. I asked for the man who takes it off of the shelf.

[fol. 576] Mr. Miller: That is what I was going to reach, Senator. When it reaches the ultimate consumer investigations show that that $1.48 less wholesale price has been absorbed by the men who handle it, and the prices to the ultimate consumer, generally speaking, are about the same as the whole milk products. Sometimes a little less.

As a bearing on that question, Senator, here is a photograph upon one side of which are the whole milk products and on the other side the imitation products, with the price that each was sold for to the ultimate consumer.

Senator Kendrick: That will answer my question fully.

Senator McKinley: These have already been submitted, have they not?

Mr. Bryan: Yes. That is a copy of what has already been submitted.

Senator McKinley: I have not the slightest desire to stop you in your argument except to save the expense of stenography. I think what you said a while ago is true. I do not think anybody will read that deep argument you are making. I mean that you are going so far back, $1.18 a hundred, and so forth, that I——.

Mr. Miller: That, of course, was in reply to questions. I am about through with the statement I intended to make. In the statements you refer too, Mr. Chairman, I was answering questions the best I could.

Senator Kendrick: I want to say for the witness that he has been very clear, but has gone more fully into detail than was necessary. This photograph submitted answers the question, if these are the relative prices for which they are sold over the shelves to the actual consumer.

Mr. Miller: Mr. Bryan suggests I read into the record those prices, with the committee's approval.

Mr. Orion: Mr. Miller, will you please give the date?

Mr. Miller: That was, I think, the last week in December, if I am correct. Either the last week in December or the fore part of January.

Here are nine cans of different kinds of these milk compounds, and the prices, respectively, are as follows: Nine cents, 9 cents, 10 cents, 10 cents, 10 cents, 12 cents, 10 cents, 10 cents, 10 cents, 10 cents.

Senator Kendrick: That was on what commodity?

Mr. Miller: That is on these filled-milk compounds—three Hebes and six others.

There are an equal number of different brands of genuine products.

Senator McKinley: Genuine condensed milk?

Mr. Miller: Yes.

Mr. Urion: Evaporated?

Mr. Miller: Evaporated milk. The prices, respectively, are as follows: Ten cents, 9 cents, 10 cents, 10 cents, 10 cents, 12 cents, 12 cents, 12 cents.

The general range of prices is there shown.

I started out in the beginning to discuss the economic pressure that this is bringing on the dairy interests. It already appears in evidence here that in 1920 there were 85,000,000 pounds of the finished product of these compounds sold in the United States. I made a computation last evening and found that that meant that the dairy farmers of America had lost a market for 5,300,000 pounds of butter fat which, if converted into commercial butter, would have made over 6,000,000 pounds. Now, there is, as the witness stated, a wonderful opportunity for the growth of this business, not because of the excellence of the product but because of the lower cost of manufacturing it. The witness said that, in his judgment, these imitation products are not competitive with the genuine. Our association is daily engaged in that work and we find that they are highly competitive, and in our judgment these two lines of business can not continue side by side, because the pressure that will be brought by the lower cost of production of the imitation compounds will gradually drive out all of the whole milk. Now, what does that mean? They say that only 5 per cent of the milk of this country is evaporated or condensed, and I believe that to be substantially correct; but the whole burden of that 5 per cent is not spread over all the farmers of the country—directly, I mean. Of course, all are indirectly affected. It is suffered by the dairy farmers in the great dairy sections. To illustrate, in the milk that we sold for June in our association 20 per cent of that milk was evaporated or condensed.

And so you will find that these compounds are not located south of the Mason and Dixon line, the places of manufacture, but rather in the great dairy sections of Wisconsin, now the premier dairy State, and New York, now second, but formerly first in importance. Further than that, it means a great depreciation of the dairy industry of this

country if permitted to continue. Now, Mr. Chairman, I think that I have completed everything that I care to say, and I thank you and these gentlemen for their courtesy in permitting me to be heard.

Mr. McKee: Mr. Chairman, may I ask Mr. Miller some questions?

Mr. Miller: Certainly.

Mr. McKee: You referred to prosecutions in the State of New York for the sale of compounds. Those products were labeled evaporated milk, were they not?

Mr. Miller: I don't know. All I know about those particular instances is what is contained in the communications I read.

Mr. McKee: The label on the can did not state it was a compound of evaporated skimmed milk and vegetable fat, did it?

Mr. Miller: I don't know.

Mr. McKee: You do not know the name of the concern or the brand?

Mr. Miller: No; they did not state it.

Mr. McKee: It might raise a question as to whether the manufacturers of skimmed milk compound were selling them under a misbranding.

Mr. Miller: Yes. It would be interesting. I don't know.

Mr. McKee: I happen to have had a talk with the commissioner of New York with respect to that. That is the reason I asked that question.

Mr. Miller: All I know of those facts is in the letters and telegrams that I have read.

Mr. McKee: My object in asking that question is to bring out the fact that even without any legislation on the subject those products would be misbranded, and it would be a misdemeanor under the laws as they stand to-day.

Mr. Miller: Your purpose is entirely proper, Mr. McKee. I have no criticism of that.

Mr. Jackman: Our next witness is Mrs. Grace Viall Gray, formerly professor of home economics in the Iowa State College at Ames, Iowa, and head of the home economics department of the Jacksonville Women's College of Jacksonville, Ill. She is also president of the University of Chicago cooperative nursery and has been a writer for many women's leading magazines.

Statement of Mrs. Grace Viall Gray

Mrs. Gray: Mr. Jackman forgets to add the most important—wife and mother—because those are quite important.

We were just talking about the prices of these things. I bought these two cans, Senator McKinley, for 15 cents.

Senator McKinley: Two cans of Hebe?

Mrs. Gray: I do marketing, of course, and I have written many articles on marketing for the leading women's magazines in the United States. To make observations for my marketing articles I go to market and stand there. I spend hours watching women market. You know we women have to count the pennies you men give us. You give us a certain allowance, and we have a budget, and we have to feed the family on that budget, and we find that the greatest place to economize and still watch the health of our families, because we all know it is better to keep our families healthy and well than to pay doctor's bills. So we have learned to market intelligently. One thing that has helped the women to market intelligently has been the installation of cash and carry stores, where we go in, both in the poor districts and in the wealthy districts. We learned during the war to market with a market basket, and we have kept that up. We have all gone marketing, in the poorer districts of Chicago, with market baskets on our arms, and the women in the wealthy districts in their automobiles. They have learned to go in and study the products on the shelf.

As I say, this is our observation. Women know what they are buying. They make a study of it. They pick up a can of this and that, pick up a can of this, and then they look at the price, because eventually the price has a great deal to do with a woman's marketing.

I have bought Hebe and other milk compounds and evaporated milk all over the United States. I have found that Hebe sells from 7 to 8 and 9 cents. I have never paid 10 cents for Hebe. That is my personal experience. I have had the women in my settlement buy Hebe, and I have had the women in my University of Chicago cooperative nursery buy Hebe, and they have never paid more than 9 cents a can.

For the benefit of the gentlemen on this committee, we have talked so much about different kinds of milk that it

has been a little confusing because there are the different [fol. 577] varieties. For instance, there is this, which is condensed milk, sweetened, sold in drug stores and in grocery stores right by the side of the whole milk evaporated. But this, of course, is a butter fat and advertised for a butter fat. Then there is this evaporated milk, which is a whole milk. Now, if you will notice the women in their buying, they do not say, "Give me a can of condensed milk.", They say, "Give me a can of Hebe," or "Give me a can of Carnation," or give me a can of a thing that they have used and they like and are accustomed to. That is the way women buy. This sells from 12 to 14 cents can. This is Carnation, their whole milk brand. Then there are the skimmed milks on the market, which are another consideration.

Now, I personally do not know very much about the skimmed milk, because I have used either evaporated whole milk, such as Carnation, or the milk compound, such as Hebe. When a woman is going to cook in her home she has certain cooking mediums. She has, first of all, the water. And I might say, gentlemen, that I make the best cake out of water. I would not think of putting even the Hebe at the price of 7 cents a can in a cake, because I would rather have these few cents to go into something else for the benefit of the whole family. I can get a beautiful cake out of water, and the farmers of Illinois have all tasted my cake. Then I can make a good cake, if I want to, out — Hebe. I use Hebe for all cooking purposes. Many women who do not know about Hebe or other cooking compounds, do this [illustrating] in the home. They take off the cream from a bottle of milk.

Mr. Urion: From the whole milk?

Mrs. Gray: The top cream, as we call it, the top of the bottle, and that is put into the refrigerator and saved for desert or pudding or cereals, and this [indicating] is what they cook with, the skimmed milk, with possibly a little of the butter fat.

I do not know, in my experience, even in the wealthy homes of Chicago, of any woman who uses whole milk in cooking. She can't afford to use whole milk in cooking any more than she can afford to use butter in cooking. This is women's day and the education has been along those lines in the women's magazines, in the agricultural colleges, in all of our lecture work, where we have taught women this: Look for your food values and your vitamines in the raw prod-

ucts. So we say, "Buy all the whole milk that you can for your family and keep that for drinking purposes, because in its raw state it is valuable as a food, but as soon as we submit it to the temperature necessary in cooking we have more or less destroyed the food values that we want to get in the children's bodies.

So that is why we have had a campaign of raw fruits and raw vegetables, teaching the women to use carrot salads.

Mr. Mann and Mrs. Mann, in Illinois, tell how they eat a turnip before they go to bed at night, because they say it is cheaper than an apple and they get the vitamines.

Mr. Urion: Who is Mr. Mann?

Mrs. Gray: Mr. Mann is head of the Farmers' Institute of Illinois and Mrs. Mann is a lecturer on the same staff of the Farmers' Institute of Illinois of which I am a member.

So in our magazines and in our lecture work on platforms, not only in the rural districts in Illinois, but in all the settlement districts we have urged the women to look for the food value in raw products, and I am sure we are carrying on a wonderful campaign in that form. So we say, "Feed your baby plenty of butter and spread it on both sides of the bread if the child will eat it." So we are in entire sympathy with the milk man because we say, "Use plenty of the whole milk for drinking purposes and spread butter on both sides of the bread. Even during the war somebody was objecting to me because I was urging the use of more butter, but I know the value of butter and milk on the table. But in cooking no woman can afford to buy the whole milk. Say she is, for instance, making white sauce. It is sometimes called white sauce and sometimes cream sauce. I believe Senator McKinley calls it milk gravy, because the farmers of Illinois say "Pass the milk gravy," but in domestic science we say cream sauce or white sauce.

A woman makes that sauce in this way: She takes either a vegetable oil, such as cottonseed oil, corn oil, or one of the nut margarines we learned to use during the war—a good wholesome product—she takes that, put it in the sauce pan, then adds flour for the thickening or corn starch; then if she has plenty of whole milk in the house and has removed the cream for other purposes, she used the skimmed milk part of the bottle for her sauce or if she is a Hebe woman or milk compound woman, she used skimmed milk, because it is cheaper, the skimmed milk with the vegetable fat. Then

the directions say, and we teach them in all of our class work in the settlement and everywhere else in the class room to bring that to a boil and allow it to boil three to five minutes. The purpose of that, gentlemen, is to thoroughly cook the flour or corn starch, so that it has to be subjected to a certain high degree of heat, and scientists tell us, Doctor McCollum and others have told us in our journal of home economics, a thing that we women specially study, that we do destroy a great part of the food value in the cooked food when it has to be subjected to a high temperature, such as the white sauce.

Cornstarch pudding is the same. You see in here the receipt for cornstarch pudding. It shall be cooked over hot water, in a double boiler, if possible, for a long length of time, to thoroughly blend it and make it taste good and to thoroughly cook the corn starch.

So that, from a woman's point of view, she likes the milk compounds, such as Hebe. They are cheap. She knows there is nothing harmful in filled milk. She knows there is nothing harmful in vegetable fat, because she is constantly using the vegetable fats, such as Crisco, in her salad dressings. She makes her salads out of these vegetable fats and they are wonderful salads, and she knows that she is getting to her family as much food value in the vegetable oil dressing as in the olive oil dressing. You pay for the flavor in olive oil, but you get very much the same results from the cheaper vegetable fat.

We have been accused at times of not reading labels. They say that women do not read labels. As I say, my experience in marketing and shopping in different parts of the country have convinced me that nowadays women do read labels. We go and look at the products before we buy them. A mother has to know how to read labels. If she can not nurse her baby she has to depend upon some of these many butter fats which are on the market. For instance, I will take them up at random. Here is Mellin's food, that is recommended for babies. A mother, to feed that to a baby, has to know how to read, because the directions are very minute. Inside that is a whole pamphlet of information that she must read before she can feed her baby properly.

I want to say right here that it was a rare treat indeed to have heard the other day Doctor Brennemann, of Chicago. Every mother in Chicago worships Doctor Brennemann.

He has saved more babies from dying and he has done more charity work, more philanthropic work than any other doctor I know of, and he is a wonderful baby specialist. Every woman in the settlements, every woman on the street car, knows who Doctor Brennemann is.

If a mother is going to feed her baby, is going to the store to buy something for her baby, suppose she buys Borden's Eagle brand condensed milk, she has got to be able to read or have somebody read for her, because in this little fine type she has got to find down here the following directions:

"Have proved satisfactory from years of experience," and she has to read that she has to add a certain amount of water, according to the age of the child. She must prepare it accordingly. Or Horlick's malted milk. No woman of intelligence, or even an ignorant woman, can prepare that for her family or children without opening it up and reading the directions, and yet they say we can not read labels, that we do not know what we are feeding our families; because we can not read. The women can read, and the women in the settlements are taught to prepare proper things for babies. If they can not read themselves they go to somebody they trust and have confidence in and have that person read the label to them.

Hebe is a cooking medium. It is not a baby food, and to my knowledge it has never been fed to a baby as baby food. It is a product that housewives like for cooking and baking because it is cheap, it is satisfactory, it is wholesome and nutritious, and it produces delicious results. The white sauce or milk gravy that is made with Hebe is more delicious than the white sauce made from the skimmed milk which is left in the quart bottle of milk that is brought and dropped at the back door by the milkman.

We have tried out in the laboratory many experiments preparing this foundation that is necessary for all vegetables, the white sauce, and the persons that we have tried it on were all kinds of people and invariably they pick as the better tasting product the white sauce made with Hebe, because I think I can explain, it is that rich cocoanut fat in it which we all know is very easily digested and approved by the medical profession.

To further convince you that Hebe is sold as a cooking liquid I want to show can explain, it is that rich cocoanut fat in it which we all know is very easily—are the milk prod-

[fol. 578] uets. It is not listed as a baby food and never has been listed as a baby food.

I wonder if I have brought out clearly how the hospitals and teachers of cookery feel about these compounds, because I feel very strongly about them. I have used them for years. I learned to use them, gentlemen, from my Journal of Home Economics. The Journal of Home Economics, which is the national organ of our association, does not accept anything without thoroughly testing it and applying it and finding that it has a place in the home economy. Good Housekeeping used it. They star it. They have a star in front of it. That star means that it has been approved by Doctor Wiley, well-known chemist and food expert, and all women know that if a thing is starred in Good Housekeeping it has the approval of people who know their business.

These magazines to which I contribute, and which other women read, have found them to be what they are advertised to be. They have found them to be the most inexpensive things yet found as cooking liquids, just as they have found that oleomargarine is cheaper for the foundation of the fat in cooking, just as they have found that for salad oils the vegetable oils are cheaper and give just as good results because, after all, it comes down to cutting the high cost of living. We women have to figure that, because, as I say, we are the ones who have to do the buying. We are the ones who have to do the cooking. We are the ones who have to set an appetizing table and to study those budgets. We are urging them to make budgets.

A woman in Chicago, who lectures before hundreds of women every day, was telling me that she wished she could come up and hoped to come and tell the committee what milk compounds have meant to women she is teaching every day. She is trying to get more protein in the bodies of the women who have to scrub off the floors every night. She said, "You know, the only protein that these working women have been able to buy was the protein in milk compounds, such as Hebe, and I want them to have that protein for their bodies, because it does build bone and muscles. The question of vitamines, of course, those women do not know about. We have to plan their diet for them. We have been urging more raw food, and particularly urging the greater use of spinach and raw vegetables to get those vitamines. They don't know why we are urging it, because we can not talk to them about vitamines.

Right there, it is rather interesting to note that in the course of this survey work I made we found they were using the Hebe for cooking, and invariably where the Hebe stood on the shelf or on the table were great big bundles of dandelions or spinach. These people that want this cheap cooking liquid are the people who eat plenty of the leafy vegetables that Doctor McCollum says are rich in vitamine A. So they get that vitamine A without knowing about it.

We are teaching these women how to use these compounds, and they use them with wonderful results. We have taught them greater food values through that one compound Hebe. We have taught them that they get more protein, they are getting more carbohydrates, they are getting more food values, because they can afford that when they can not afford to buy three or four quarts of milk, of whole milk, a day. I wish they could, if the price was cheaper. We women would like to see them use nothing but whole milk, but they have not the money to buy it, and they have the money to buy these milk compounds, and we do not want them legislated from the market, because they are not being used as baby food, but they are being used as a cooking medium and that is why we want them kept on the market. We are perfectly willing to do anything we can, if there is anything we can do with different size cans or something, so that we can keep on the market this cheap cooking compound, full of food value, that gets the necessary elements into their bodies so vital to good health.

Is there anything further?

Senator Ladd: Just a moment. You were down here some little time ago?

Mrs. Gray: Yes; I have been here.

Senator Ladd: And another lady was with you?

Mrs. Gray: Yes.

Senator Ladd: At that time you asked for an interview with me, did you not?

Mrs. Gray: Yes.

Senator Ladd: And you made your report as a result of that interview?

Mrs. Gray: Yes; I did.

Senator Ladd: You stated in that report, referring to myself, "that he had formed his opinion and had stated that it made no difference what evidence was brought to bear against it, he would vote for the Voigt bill."

Mrs. Gray: That is correct, Senator Ladd.

Senator Ladd: You made that statement?

Mrs. Gray: Yes, I did.

Senator Ladd: And did you get that statement from me?

Mrs. Gray: Yes; I did, Senator Ladd.

Senator Ladd: You certainly did not.

Mrs. Gray: I am sorry if I misunderstood you.

Senator Ladd: You were here as a lobbyist at the time, if I may say so very plainly, and I dislike your methods, so much so that I have refused to be interviewed by some of the other members who have come here since, and you reported this statement, which is absolutely false. Whether it was intentionally so or not I do not know, but I want that to be a part of the record.

Mrs. Gray: Senator Ladd, I am sorry, and very sorry, and offer my apology. I will try my very best to quote your words. May I?

Senator Ladd: You may.

Mrs. Gray: Just a minute. I will try to remember the exact words, Senator Ladd.

"Nothing that you can say, Mrs. Gray, will ever change my opinion upon this subject. I am against milk compounds."

Is that correct, Senator Ladd?

Senator Ladd: No; it is not.

Mrs. Gray: I am very sorry.

Senator Ladd: I told you also that I was one of the first to be interviewed with regard to Hebe, and that a woman followed me on the train from Chicago and out to Illinois, outside into the State, and that I commended it for the purpose which it was claimed for at the time.

Mrs. Gray: Don't you remember, Senator Ladd, making that statement?

Senator Ladd: I did not make the statement. It was very far from my mind at the moment.

Mrs. Gray: I will have to accept your statement, Senator Ladd. It is a very difficult position, because I remember exactly what you did say.

Senator Ladd: You may think you did.

Mrs. Gray: Well, I will say I think I did.

Senator Ladd: I object to that kind of lobbying and interviewing.

Senator McKinley: Any other questions?

Mr. Jackman: In view of the fact that Senator Ladd has brought that up, perhaps it might be well to mention that

I wrote Senator Ladd, not in connection with this bill in Congress, but long before that, along in May, 1921, and asked him with reference to his view on the subject, in view of the fact that he had written an article which had been published in one of the magazines.

Senator Ladd: That I have never seen. I would like to know what it is.

Mr. Jackman: I have a letter here which was written by Senator Ladd to me on May 16, 1921, and I think in view of the statement that has been made it is only fair to everybody that it should go into the record.

Senator Ladd: That is perfectly satisfactory.

Mr. Jackman: For the benefit of the committee [reading]:

"I beg to acknowledge your letter of May 13, asking with regard to compounds composed of evaporated skimmed milk and vegetable fat.

"I am not aware at this time of any article I have written bearing on the subject. I may have at some time been interviewed, but even this I do not recall at the present time.

"I see no objection to the sale of skimmd milk to which there has been added a vegetable oil, provided the said milk is properly labeled, so as to be clearly evident what the product is, and it is not sold in place of evaporated milk. It is not a suitable article for food for infants, in my judgment, and to deliver this compound when condensed milk is called for would be a violation of the spirit of the pure-food law, as well as an intentional deception of the purchaser of the same. For baking and cooking purposes there can be no objection to it if well made, and I believe in utilizing every product that can be made available, provided the same is honestly labeled and sold.

"Very truly yours, E. F. Ladd."

Senator Ladd: There is no objection to that at all.

Senator McKinley: Call your next witness.

Mr. Jackman: In view of the fact that Senator Kendrick has asked some questions with reference to prices, when the question was asked I looked through my file here and I find that I have here a graph which was prepared by Doctor Aggar, running down to the 1st of July, 1921. I have two [fol. 579] of them which I think will show you gentlemen the details of this matter a little more clearly and in graphic form than can be shown by testimony.

This is from the manufacturers' standpoint and from actual figures. On the bottom are the months and the years. On the left-hand side are the prices, and on the right-hand side are the prices. The top graph shows the price of condensed milk per case; that is, the selling price, with the ups and downs of milk which came after the war and the depressions.

The next shows the price of compounds, running from $5 down to $3.50, showing the difference, you see, of about $1.50, on an average, per case.

The next shows the price per hundredweight of 3.5 milk paid by the condenser, running from $3.50 in August, 1919, down to about $1.85 in July, 1921. There is a break in this, running from approximately the 1st of September down—you will notice the dotted line—until February, 1921, where we did not manufacture, because of the surplus stocks that there were in this country, but we took the milk just the same and made it into butter.

The next line, in heavy black, is the price of butter fat per hundred pounds of milk, and there is a comparison, you will notice, with the price paid by the creamery, which shows that the price paid for the milk by the condenser is uniformly higher than the price paid by the creamery.

The bottom line is the price of coconut fat. You will notice, also, a break in there where there is no manufacture.

The second part shows the relative profits in condensed milk and milk compounds, made from actual figures. These are manufacturers' figures.

Starting in August, 1919, and running down to the 1st of August, 1921, the difference being $1.75, and going up and down, until in August, 1921, it was just slightly less than $1.50.

That is, what you had in mind, is it?

Senator Kendrick: What I had in mind more particularly, as I suggested to Mr. Miller, was to determine just what the difference in the cost was to the man or woman who bought it off of the shelf.

Mr. Jackman: May I say to you in this connection I have had some investigations made in connection with that. That is dependent upon a great many things. There is first the question of star sales, which you are familiar with, where they actually sell the product at less than cost. For example, in milk, they have what is known as star sales, where they feature these products. Then in addition the

price of evaporated milk goes up and down. A man might have some compound on his shelf which he got at a higher price. If there had not been any ready sale, if he had not gotten rid of his stock, the retail merchant keeps the price up until he gets his money out of it. Meanwhile he may have disposed of his stock of evaporated milk, and buying that at the lower market price, the price of the evaporated and compound might be very much closer together under those circumstances.

We have found that to be a fact in investigations in Milwaukee and in some other cities, but the price varies ordinarily between the price of what is known as the standard brands of evaporated milk, those being the nationally advertised brands, and the price of compound from two to three cents a can. There are some somewhat cheaper, unadvertised, private packed brands of evaporated milk on the market which at times may sell at less. For example, when the panic came on a year ago and the banks insisted on having their money a lot of these companies put their evaporated milk on market at a loss. I know one company lost over a hundred thousand dollars in that way. There is not anything that you can say definitely as to just what the price is, except that the general price ranges, as I say, two or three cents a can. I mean by that what we call a small sized can, 48 to the case. This can of Hebe is a tall sized can. There is a small size evaporated milk, 96 to the case, which we call baby size, which you probably take when you go on a camping trip.

Senator McKinley: What does that can wholesale for?

Mr. Jackman: I just show you a chart showing the range of prices. They are 48 in a case. The prices have ranged from——

Senator McKinley: Mrs. Gray testified a moment ago that she bought two cans of this product for 15 cents.

Mr. Jackman: Yes.

Mr. Bryan: That is not commonly sold at anywhere near that.

Mr. Urion: She testified it ran from that to nine cents.

Mr. Jackman: I think the investigation we have made showed the average price—of course it is all cheaper now—ranged somewhere from eight to nine cents, and that at that time the same investigation showed that evaporated milk was selling anywhere from 12 to 15 cents of the same size; that is, the tall size can. That is through the retailer.

Of course you have the elements of retail dealers' charged in here, which cannot be regulated. He may charge more and he may charge less. The price of Hebe in August, 1919, was $5 per case of 48 cans. That ran down in July, 1921, to $3.50 per case of 48 cans. At the same time, in 1919, the price of the Carnation evaporated milk was $6.75 a case, while Hebe was selling for $5 a case, and on July 1, 1921, Carnation was selling for $5 a case of 48 cans, tall size, and Hebe was selling for $3.50 a case. There is a variation of approximately $1.50 per case.

Senator McKinley: Three cents a can?

That is about as near as you can get to it.

Mr. Bryan: That is the wholesale price?

Mr. Jackman: As I say, we cannot tell about the retailer. We have got to take the individual conditions which affect the price the retailer gets for it. It is just like shoes. You can go into one store and buy things cheaper than you can in another store. It is a question of the turnover of the product and the overhead and a lot of other elements which enter into the retail transactions.

Senator McKinley: Right here, gentlemen, let me say if it is agreeable to Senator Kendrick—it is to Senator Ladd—we will run until half past 12 now and then get at 2 and run until 4.

Mr. Urion: Just one little thing I think we all overlooked, which may have been of some interest to the committee. Mrs. Gray produced some whole milk in quart bottles which she evidently purchased this morning. For my information I would like to know just what she paid a quart for that whole milk.

Mrs. Gray: Fifteen cents for the whole milk, and I asked some housewives what they are paying their milkmen and they say 17 cents a quart.

Mr. Holman: Did that include the price of 5 cents for the bottle?

Mrs. Gray: It probably did.

Senator McKinley: Milk is 13 or 14 cents here.

Mr. Urion: Doctor Ladd, I presume, will return some time during the day. On this subject I just wanted to refresh his recollection about his article and I do not wish to do so in his absence.

Mr. Bryan: What was the article?

Mr. Urion: When Doctor Ladd comes back we will present it. I don't want to do so in his absence, if you will pardon me.

Statement of Mr. Glenn P. Cowan, President Carolene Products Co., Vice President and General Manager Arctic Ice Cream Co., Detroit, Mich.

Mr. Jackman: Give your name and business to the committee.

Mr. Cowan: Glenn P. Cowan. I am president of the Carolene Products Co., of Detroit; also vice president and general manager of the Arctic Ice Cream Co., with which the other company is affiliated.

We manufacture compound under the name of Carolene. It is labeled in large letters on the can—there may be one here—"Carolene a compound of refined nut oils and evaporated skimmed milk." The label carries the legend "Do not use in place of whole milk for infant feeding." That label was changed a little over a year ago. We bought out the Carolene Co. in March, 1921, and shortly after we took the company over we changed the label so that it would carry that warning against using the contents for infant feeding.

We oppose the passage of this bill for the reason that we think it would deprive the consuming public of a wholesome, economic food product, and we think it would be a backward step for the dairy industry, contrary to the contentions of our opponents.

It has been stated here that skimmed milk, which would otherwise be wasted has not been used to any extent whatsoever in the manufacture of compound milk. I contend that that statement is incorrect. We have purchased large quantities of skimmed milk from creameries in the neighborhood of our plant and used it in the manufacture of Carolene. If the proponents of the bill want to refer to any of these companies they can verify the statement. We have purchased skimmed milk from the Detroit Creamery Co. at their plant at Brighton and Powerful, Mich., and I think it is called the Farmers' Cooperative Milk Co., at Elsie, Mich., and from Chapin Sacks Co., who operate a milk plant at Webberville, Mich. It is true most of this milk has been bought during the months of April, May, and June, during the flush, when these companies have milk

[fol. 580] that they do not know what to do with, so they skim it and sell the butter fat, and we bought the skimmed milk from them. In some cases we bought the whole milk, skimmed it and sent them the cream, and we performed the skimming operation because that is a little easier way of handling the milk.

Our principal business, speaking of the Arctic Ice Cream Co., is the manufacture and sale of ice cream. We are also selling milk to restaurants and hotels. For every pint of cream that we sell to people who insist on having bottled cream we are forced to skim about seven pints of milk, leaving us six pints of skim milk to make some disposition of, and the only way we can get cream that is suitable for delivery to the bottle trade is by buying the whole milk, because the farmer is not prepared to separate the cream and have it taken care of in such way that we can deliver it a day or two later and have it sweet. So we buy the whole milk from the farmer, ship it into the city, where we separate it and manufacture the skim milk into Carolene.

In the manufacture of ice cream we make something over a million gallons a year, and for every gallon of ice cream that is made there is a by-product of 7 or 8 pounds of skimmed milk. Our standard in the State of Michigan, which is about the average standard for ice cream, requires 10 per cent butter fat and 10 per cent milk solids not fat. Our average milk will run about 3.5 per cent butter fat and 8.5 per cent solids not fat, or a total of about 12 per cent solids of milk, so that we use exactly the same amount of milk solids, not fat as we do fat. For every pound of milk we take in we have a surplus of 5 pounds of milk solid not fat. That would be in the neighborhood of 55 or 60 pounds of skim milk left over.

We have made and are equipped to make powdered, barreled, sweetened, and condensed skim milk, which products are sold to bakers and confectioners. Our competitors in Detroit are also prepared to make powdered, barreled, sweetened, and condensed skim milk, and there is such a flood of those products of skim milk on the market that we have been unable to get a sufficient price for them to pay for their manufacture. That is why we got into the compound milk. We have made no money on our compound milk business up to date, but we have lost less money than we would have lost had we made skim milk powdered, barreled, sweetened, and condensed milk skim milk.

Last year, as I say, we bought large quantities of skim milk from our competitors in Detroit, because as the result of Mr. Holman's propaganda there many of the housewives have been led to think that if they touch a can of compound milk they would drop dead the next minute—worse than alcohol.

Our sales are about half of what they were, and so we have had the problem of using up all of our own skim milk this year in the manufacture of compound milk. On the other hand, what did our competitors have to do with it this year when we could not use it? They are equipped to manufacture powdered, barreled, sweetened, and condensed skim milk, and they have had to make more of those products in order to dispose of their skimmed milk. But the superintendent of the Detroit Creamery Co. told me that he had figured out that they had lost more money trying to save the skimmed milk than they had ever gotten out of the product, so they run the skim milk down the river—thousands of pounds a day. Where they do not have any river to put it in they don't know what to do with it. They asked the farmers if they could not send it back to the farm, and if they didn't have stock to feed it to, they asked them to throw it on the land as fertilizer, which was done. I talked to some of those farmers who had the skimmed milk sent back. They didn't like it. They did not want the skimmed milk because they were not organized to use it on the farm, and the labor of washing the can was worth more than the skim milk. When the creamery kept the skimmed milk they sent the can back clean, but when the can came back with the skimmed milk in it the housewife had to wash the can, and they would prefer not to have the skimmed milk back.

As I say, we have used a large quantity of skimmed milk which we bought from neighborhood creameries, in the manufacture of this product, and skimmed milk which would have gone to waste otherwise.

To my mind the outstanding problem of the dairy industry today is this problem of the utilization of the skimmed milk. Our farmers all say they are losing money on the products of milk. Well, I would not be surprised if they were, because they are selling the milk for the value of the butter fat and they are getting nothing for the skim milk. It takes feed and labor to produce that 8 pounds of solid matter in the milk not fat that they are getting prac-

tically nothing for. If they are making money on the production of milk they are selling the fat for a high enough price to cover the loss on the skimmed milk. Where skimmed milk is fed on the farms to stock it is not returned entirely, and there is an economic loss in feeding skimmed milk, which is a valuable human food, to stock to produce another form of human food not so valuable. About probably one-seventh of the actual food value is returned in the form of pork. To my mind the dairy industry would be better off if instead of producing more milk than the domestic consumption of all these various milk products, they would help to put on the market these valuable by-products. I would rather sell a million gallons of ice cream and market our by-products and get more money out of them than to boost our business to a million dollars a year and still throw away our by-products. It does not increase our capital account, overhead and fixtures charges, and we would be better off with a smaller production and a profitable sale of all that we produce.

Another thing. I think more butter would be used, speaking of the small per capita consumption of this country, if better butter were made. A large percentage of the butter made in the country to-day is made by the centralized creameries. The farmer separates his milk on the average two or three times a week. He takes it to the local creamery, which ships it from there on to the city, and in this time of the year it comes in boiling over. I have driven past the station at Detroit and seen the cream boiling over the can, down the side of the can onto the truck and down from the truck onto the platform. The creamery takes this sour cream, neutralizes it, aerates it, oxidizes it, pasteurizes it and finally makes out of it butter that tastes pretty good when it is first made, but it does not stay that way very long. If you do not happen to get it when it is fresh you get a mighty poor grade of butter. It is a significant thing to me that the New Valley Creamery Co., one of the largest centralized companies, has just recently instituted a department of whole milk creameries. In other words, they are starting in now to establish a creamery where they will buy the whole milk from the farmer, separate the milk and make butter out of the sweet cream, evidently believing that there is a demand for better butter, and they are going to supply it in that way.

A year or so ago Mr. Rau, who was formerly chief of the Bureau of Animal Industry of the Department of Agriculture, in an address delivered at some convention or in an article for the trade papers—at any rate it was published in the New York Produce Review—expressed his opinion that in the future there would be a movement back to the local creameries, the whole milk creameries buying the whole milk from the farmer, separating the cream sweet, making creamery butter, and manufacturing the skimmed milk into edible food products, into casein and some of these other things where the amount realized from the skimmed milk is practically nothing. In order to do that we have to find some edible food products that people will buy and use. A certain amount of powdered skimmed milk is used, a certain amount of sweetened skimmed milk is used for manufacturing purposes, chiefly. Some cottage cheese is used, but not very much. It seems to me the compound market is another important outlet for that skimmed milk. It is true it will not use all the skimmed milk that is wasted, by any means, but just to the extent that it provides a market for a certain amount of skimmed milk, to that extent it will help increase the value of skimmed milk and the price the farmer gets for it.

The statement has been made here that the retail grocer sells regular evaporated milk for the same price he sells these compounds. That may be true to some extent. He may sell the compound for more in some instances. But, taking the general run all over the country, by and large, you will find the can of compound milk sells for 2 or 3 cents a can less. Our present price to him is $3 per case for 48 tall cans. The price of the advertised brands of evaporated milk is $4 per case. At the present time the differential is a dollar per case. That differential has been, I think, as high as $1.75, and has been as low as a dollar, and, I think, as low as 75 cents for a few days. On the whole I think there is a difference of from 3 to 4 cents on the wholesale price, and with our competitive system of retailing I think on the average that margin is passed on to the consumer. It is very possible to go out and by selecting a time and place, find instances where you can buy evaporated milk for less money than the compound. On the other hand we could, by taking specific instances, show where the compound has been sold at a price as low as two cans for 5 cents. Mr. Holman frightened one retail

grocer into thinking that compound was going to be killed right away and he advertised and sold two cans for 5 cents. [fol. 581] to get rid of it. He didn't want to be caught with any of it on his shelves.

The progonents of this bill would make out of the manufacturers of the compound scoundrels, blackguards, exploiting the people. The stock of our company is fairly closely held. Those men that hold that stock are all high principled business men. We would not be making a compound milk if we thought we were killing the babies of the country or were going to ruin the dairy industry. Two or three of our stockholders have large dairy plants. We think this is a legitimate product, that it has a place and that it is helpful rather than detrimental to the dairy indust-

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Mr. Campbell: I don't know just what position he holds, but I think he is president of the National Milk Producers' Association, composed of milk producers and dairy farmers, made the statement in a meeting that every manufacturer of compound milk should have the skull and cross bones indelibly tattooed on his forehead. If we merit that indictment, Senators, what should be done to the Borden's Condensed Milk Co. which is making this Eagle brand sweetened milk and advertising it specifically for infant feeding when from the testimony of the physicians who have been here the committee is well aware, I think, of the effects of the feeding of this product. Just as recently as two weeks ago I saw an advertisement in a Detroit paper showing and portraying a picture of a healthy, or at least fat, baby. I don't know whether he was healthy or not, but I think the advertisement said he was—extolling the virtues of Borden's Eagle brand of condensed milk for infant feeding. I have seen those advertisements in the Detroit papers frequently. On the other hand compound milk is not advertised for infant feeding, and so far as we know it is not used for infant feeding. I have made a good many inquiries since this thing came up, and I have found only one instance where it was ever used for infant feeding. In that particular case the mother said she had used it exclusively, and the infant was healthy, a well-developed youngster. However, in the absence of more definite information, we put on the labels of our cans, "Do not use in place of whole milk for infant feeding."

That is all I have to say. I would be glad to answer any questions on the manufacture of this product.

Mr. Bryan: How long has that statement been on your label—"Do not use for infant feeding"?

Mr. Cowan: The first labels we purchased after we took over that part of the business bore that legend. They were purchased, and we began using them last summer. I do not remember just when it was.

Mr. Bryan: The summer of 1921?

Mr. Cowan: Yes.

Mr. Balderston: I would like to ask a question.

Senator McKinley: Certainly.

Mr. Balderston: What has been the proportion of skimmed milk you have bought to the whole milk you have bought for the manufacture of Carolene?

Mr. Cowan: I don't know what that would be, Mr. Balderston. Of course this whole milk which we bought, we have had the cream to dispose of, because we do not make butter. The cream is all sold to other ice cream manufacturers, or we distribute it as bottled cream.

Mr. Balderston: Can you not make an estimate?

Mr. Cowan: No; I don't know. Of the milk we purchased, the whole milk, only a small part is used in the manufacturing of cream. We buy whole milk for other purposes. We buy it for distribution in fluid form in the city of Detroit.

Mr. Balderston: Then you don't know?

Mr. Cowan: No; I don't know.

Mr. Balderston: Well, how much have you bought?

Mr. Cowan: Of skimmed milk?

Mr. Balderston: Yes.

Mr. Cowan: We have bought hundreds of thousands of pounds. We bought 400 pounds a day for a long while last spring from one plant.

Mr. Balderston: Is that located near your plant?

Mr. Cowan: The place from which we bought the largest amount is located about 48 miles from our plant, on the same railroad.

Mr. Balderston: Shipped by railroad?

Mr. Cowan: Shipped direct to us by railroad; yes.

Mr. Balderston: Do you have an exporting firm, or any export representative in New York?

Mr. Cowan: We have not.

Mr. Balderston: Do you sell for export?

Mr. Cowan: I don't think we have ever sold for export; no.

Mr. Balderston: Have you tried to?

Mr. Cowan: I don't know. Brokers may have offered our stuff for export.

Senator Kendrick: Is there an overproduction of condensed milk—milk made of the whole milk?

Mr. Cowan: Is there an overproduction?

Senator Kendrick: Yes.

Mr. Cowan: There has been, Senator, for the last year or two. You see, the condensed-milk business was speeded up very rapidly during the war on account of the demand for the export consumption of evaporated and condensed milk, so that when the export market dropped off a couple of years ago it left the country with more manufacturing facilities than were needed for the decreased volume of export business and domestic business.

Senator Kendrick: That was true of other lines of business.

Mr. Cowan: In the meantime the domestic consumption has been increasing each year. Just at the present time I should say there is not right now any surplus of evaporated condensed milk on the market. There was until that slack was taken up by the increase in domestic consumption.

Senator Kendrick: Can you tell us whether or not the demand for condensed milk, the whole milk, is growing, or the consumption increasing?

Mr. Cowan: In the trade, Senator, we speak of this product, the sweetened milk, as condensed milk, and the whole evaporated milk as evaporated milk. On the whole, the demand, I think, for sweetened milk is decreasing. That is my impression. I have not any figures. But the demand for evaporated milk in the domestic market has been growing rapidly. A few years ago there was not anything but the sweetened milk on the market. Evaporated milk was not a factor, really, until 1902, or even after that, and it has come up, steadily increasing each year. It is more suitable for most purposes than the sweetened milk, which carries such a large percentage of sugar.

Senator Kendrick: Sweetened milk, then, as I recall the statement made by the witnesses, is the skimmed milk with sugar added.

Mr. Cowan: No. It is the whole milk condensed, and with the sugar added.

Mr. Urion: Either the whole milk or skimmed milk.

Mr. Cowan: There is skimmed condensed milk on the market also.

Senator McKinley: Are there any other questions? If not, we will recess until 2 o'clock.

(At 12.30 o'clock p. m., a recess was taken to 2 o'clock p. m.)

After Recess

The committee reconvened at 2 o'clock p. m.

Senator McKinley: Gentlemen of both sides, Mr. Gray Silver, of the American Farm Bureau, is a busy man. He wants to testify and get away. If it is agreeable, go right at it, Mr. Silver.

Statement of Mr. Gray Silver, Washington Representative of the American Farm Bureau Federation, Washington, D. C.

Mr. Silver: Thank you very much, Mr. Chairman. I will have but little to say at this time, as we had very extensive hearings on the House side.

Senator McKinley: Yes. Don't repeat it.

Mr. Silver: I think it would be unnecessary. I think it sufficient to say that the American Farm Bureau Federation is very much in favor of the Voigt bill and urges its passage at an early date. I will stop at that if that suits your purpose. I can go into the reasons just so far as you like, and will answer any questions if there are any.

Senator Ladd: On what grounds are they in favor of the bill?

Mr. Silver: They believe that the selling, as it is done, and the labeling, as it is done now—I am not familiar with just the wording of those labels—it has been unhealthy for children, and mothers have been imposed upon, for when they ask for milk they expect to get cow's milk and they have got skimmed milk with coconut oil or other mixtures that were not the best food for infants, and the public was imposed upon, because when they believed they were buying milk they were not buying milk. It was a fraud.

[fol. 582] Senator Ladd: How extensive an organization in this country is the Farm Bureau Federation?

Mr. Silver: The Farm Bureau Federation consists of some 47 of the 48 States which have federations, some 2,000 counties of the 3,200 counties that have county organizations. The membership runs above a million, possibly a million and a half.

Mr. Jackman: Have you any knowledge, Mr. Silver, yourself, of any specific instance where this compound has been fed to infants?

Mr. Silver: In the testimony before the House committee specific cases were mentioned where women had asked for milk and had been sold the different combinations.

Mr. Jackman: That is not what I asked you, if you will pardon me. I asked you if you had any specific instance of Hebe having ever been fed to infants?

Mr. Silver: Personally I do not know that I have.

Mr. Jackman: I have never heard of such a case—that is, where there was any specific data given. That is the reason I asked the question.

Senator McKinley: That is all, then, Mr. Silver.

Mr. Silver: Thank you, gentlemen, very much.

Statement of Mr. Paul R. McKee, Secretary and General Attorney of the Carnation Milk Products Co. and of the Hebe Co., Chicago, Ill.

Mr. McKee: Mr. Chairman and gentlemen, my name is Paul R. McKee. I am secretary and general attorney of the Carnation Milk Products Co. and of the Hebe Co.

These two companies are allied in interest and in control, the Hebe Co. being a subsidiary of the Carnation Milk Products Co., handling the sales of the compound advertised under the trade name of Hebe.

The Carnation Milk Products Co. was organized on the Pacific coast, in Seattle, about 22 years ago, and has been engaged continuously in the manufacture of evaporated milk under the brand "Carnation." In addition to that the company has established and maintained at Seattle and in the Commonwealth of Wisconsin large stock farms which have been created and maintained to a considerable extent for the purpose of breeding a type of dairy cow which would give a larger flow of milk and prove more profitable to the dairyman.

I would like to say here that the prosperity of our business is so intertwined and dependent upon the prosperity

of the producer of the raw material that anything which affects adversely the prosperity and well-being of the producer of the raw material which goes into our product must necessarily have a bad effect upon our industry. In other words, the prosperity of the two must go hand in hand. We could not endure very long if the men who produced our raw material were not able to make a profit.

With respect to the compound I would like to state briefly for the record and for the benefit of the committee our connection with it and the way in which we became interested in this product.

In 1915 two men by the name of Stephens and Baughman, after considerable experimentation at Jefferson, Wis., discovered the process by which the product Helvetia is made. We recognized great possibilities in this product, both from the standpoint of the producer of the raw material and its economic advantage to the consumer. We recognized at that time that there was very little milk used in the kitchen as a baking and cooking ingredient. We believed that a demand could be created for a product of that kind, and by so doing a new avenue would be created for the product of the dairy farm. I think we all recognize that there were other cooking ingredients used at that time, and it was our thought and purpose, which was confirmed by our subsequent experience, that a demand could be created for this product for certain specific purposes. We certainly did not have in mind the purpose of putting a product on the market which was going to compete with our main product, Carnation milk, and which to-day, of course, is the major factor in our business.

We gave the matter a very great deal of thought and finally decided to take over this industry, which we did, and it was then operated under the name of the Sheboygan Evaporated Milk Co. We decided to place this product on the market for exactly what it is. We adopted a label upon the can which would proclaim in loud language exactly what the product was and the purposes for which it could be used. We decided to advertise the product in a national way, and all of our advertising, all of our sales methods, all of our publicity work has been fair and square. We have advertised the product as a compound of evaporated skimmed milk and vegetable fat, and in the advertising matter which I will leave here for the committee's examina-

tion you will find that the same has been prominently displayed in the advertising matter.

The product came upon the market in this way, not as evaporated milk. It was never permitted to masquerade for anything other than exactly what it was. We determined that the product must stand squarely on its own feet, and if it did not meet with public favor it must fall and go off the market.

When we took over the product the label, in our opinion, was not a proper one, for it had on it—I never saw the label myself; the distribution of the product had been very limited—but it had, I think, on the label "You will like it better than milk," or something to that effect. We went to Washington, had a conference with Doctor Alsberg, who was then Chief of the Bureau of Chemistry. We showed him the product and asked him to approve of the label which we had suggested, which was substantially in the form in which you see it here. We told him of our purpose to merchandise this product for what it was. He designated the product as a compound under the pure food and drugs act and approved of the label which you see here.

We not only did that, but we instructed the retailer to sell the product for what it was, and we instructed our salesmen to tell the dealer that it was not evaporated milk, but it was a new product made of skimmed milk placed upon the market for certain specific purposes, and must not be sold for evaporated milk.

Some changes were made in the label. Of course, you will appreciate that this is a new product upon the market and the matter of merchandising it and the matter of labeling it was a matter of development, but all of the changes that were made in the label were made for the purpose of emphasizing what the product was and its uses.

We, very soon after the product was put on the market, in order to insure its being properly sold, put on the top of every case this notice which I hold in my hand: "Important notice to grocers. Do not sell Hebe as evaporated milk." I will not read this, but I will offer it for the record. It simply states very clearly exactly what the product is and what its purposes are.

(The notice referred to is as follows:)

IMPORTANT NOTICE TO GROCERS

DO NOT SELL HEBE AS EVAPORATED MILK

The legal definition of evaporated milk requires a product so designated to contain a specific quantity of milk fat (animal), whereas the fat content of Hebe is vegetable; hence the selling of Hebe as evaporated milk is a misrepresentation, and is punishable by fine.

Hebe is a pure, wholesome, and nutritious food, consisting of only two ingredients, pure, fresh cows' milk from which the milk fat has been removed and the refined edible fat of the coconut. Nothing is added to and nothing is taken from the food value of either in the process whereby they are combined.

Hebe complies with pure food laws, Federal and State. Its purpose is to supplement the use of milk for cooking and baking.

Sell Hebe on its own merits and for exactly what it is. "A compound of evaporated skimmed milk and vegetable fat."

The Hebe Co., Chicago-Seattle.

In 1920 the question of the nutritive value of foods with respect to their vitamine content came before the public and also the matter of the fact soluble A being largely in the butter fat, and in deference to views that were expressed with respect to that and in line with our own policy we placed upon the label in March, 1920, this phrase, "Do not use in place of milk for infants." Previous to that the label also had on "for cereals, coffee, cooking and baking." We struck off the word "cereals" continuing the recommendation for use in coffee, I think, until September, 1921. Is that correct, Mr. Jackman?

Mr. Jackman: No. In March, 1921.

Mr. McKee: Well, about a year ago.

With those changes, the label as you see it here is the label which was originally adopted by us in 1916. The other change was made in the product, in the fat content. [fol. 583] It originally had 6 per cent of vegetable fat, and in order to increase the fat content and its shortening value, and to make it more available for the purpose for which we were putting it upon the market, we increased that content to 7.8 per cent, or it averages that now, or a little nearer 8 than 7, the fraction being material.

The first opposition to the manufacture and sale of the product arose in the State of Ohio which, as I recall, was in 1918. There is a law upon the statute books of the State of Ohio which establishes the standard for evaporated milk and provides that you can not sell evaporated milk unless it contains a certain per cent of solids, of which a certain per cent shall be butter fat. Similar statutes are on the statute books of other states.

The agitation in the State of Ohio was started by the gentleman who appeared here as a witness yesterday or the day before, Professor Erf, the head of the dairy school, I think, of the University of Ohio, and, as he stated, John C. Pretzman, who at that time was the attorney for the John Wilde Evaporated Milk Co., of Ohio, the corporation which was subsequently taken over by the Nestle's Food Co., of America, which is a subsidiary of the Nestle's Food Co., of England, was retained by the attorney general of the State of Ohio as counsel, and prosecution was threatened by the dairy commissioner of that State against the people selling this compound in the State of Ohio. The attorney general interpreted that statute to prohibit the manufacture and sale of evaporated skimmed milk and he then made a finding of fact that Hebe was evaporated skimmed milk. The State of Ohio has never legislated directly upon the subject of these compounds. This statute which was invoked against the sale of the product was passed by the State of Ohio 25 years before compounds were ever thought of.

In the trial of that case there were three instances where it was shown that Hebe had been sold for evaporated milk. Two of these cases were evidence secured by the dairy and food department, through the inspector, and the other instance was secured by Professor Erf, I suppose, in which a dealer in Columbus filled a part of a requisition for evaporated milk with Hebe. It was found that the manufacturer knew nothing at all about the missale, and that it was made in the face of his exclusive and direct instructions not to sell the product for evaporated milk.

The United States District Court affirmed the finding made by the Attorney General and the case went up on appeal to the Supreme Court of the United States. Mr. Pretzman practically tried the case and was counsel in the Supreme Court and made the principal argument in that case. And I might say here that Mr. John C. Pretzman is now

the personal attorney for John Montgomery, the managing director in America of the Nestle's Food Co. of England.

The United States Supreme Court affirmed the decision of the district court by a divided court. There was a dissenting opinion written by Mr. Justice Day, in which Mr. Justice Van Devanter and Mr. Justice Brandeis concurred. They were unable to agree with the court as to the meaning of the statute in question.

It will appear in the record of that case that no contention was made that Hebe was other than a wholesome, nutritious article of food. The court laid down the dictum that if it can be shown that the question is debatable whether or not an innocent article can be used as an instrument of fraud the legislature is entitled to its own judgment. I might say here that I will not burden the committee with the exhaustive opinion written in that case and dissenting opinion written by Mr. Justice Day. I think it is already in the record.

Subsequent to that the opinion delivered by the Supreme Court and the record in that case was given wide publicity by Professor Erf. He sent the opinion, with a letter accompanying it, to the dairy and food control officials of many States and to the leaders of many dairy organizations, showing them how they could secure interpretation of the laws on their statute books to prohibit the sale of these products. They were not particularly successful in this, because there were very few States that adopted the line of reasoning as announced by the majority of the Supreme Court of the United States in that case. The State of Maryland has on its statute books a law similar to the law of the State of Ohio. There was a recodification of the dairy laws of the State of Maryland, and there was an opinion handed down by the attorney general of that State in which he held that this particular statute had been repealed by the passage of the codification law. Subsequent to that interpretation given by the attorney general an action was started in the State of Maryland before the attorney general's office for the purpose of securing a new opinion which would reverse that formerly given. There was a hearing held before the attorney general, in which a brief was filed by Mr. Bryan and also a brief filed on the part of the Nestle's Food Co., in each of which the object was to reverse that ruling and to have a ruling adopted similar to that secured in the State of Ohio. The attorney general,

after holding some hearings on the matter and listening to arguments, reversed the former ruling and adopted the interpretation which ruled evaporated skimmed milk off the market, and made the finding of fact that Hebe was skimmed milk. We understood at that time, and I have since had confirmation of it, that Mr. Bryan in that proceeding represented the Borden Co.

After that in the State of Maryland we fought a test case, and the main issue in that case was whether Hebe was skimmed milk. The evidence showed that a vegetable fat had been added which constituted 30 per cent of the food value of the product, and it was our contention that that changed the character of skimmed milk to that of a compound in conformity with a ruling made by the Department of Agriculture of the United States. The case was tried before a jury on the question of fact, and the jury in such cases also being the trier of the law. The Attorney General was represented by a lawyer—I believe some official of the city of Baltimore—and Mr. Bryan sat in that case and counseled with the officials of the State who were charged with the enforcement of the law.

There has been legislation pending for the last——

Mr. Bryan: What was the outcome of that case, Mr. McKee?

Mr. McKee: The jury found that it was skimmed milk.

Mr. Bryan: They found the defendant guilty?

Mr. McKee: But the only issue was, "Is Hebe skimmed milk?"

Mr. Bryan: We will discuss that on cross-examination. Go ahead.

Mr. McKee: Legislation has been pending—not pending, but an agitation to enact legislation in the States of New Jersey, Pennsylvania, New York, and Virginia for the last two or three years; and at the hearing before the legislative committee in the Senate of Pennsylvania in 1921 and 1922, and in the hearing before the Pennsylvania Legislature in 1924, sitting with the proponents of the bill, representing the dairy organizations which were trying to get this law passed and counseling with them during the hearing and before and after it, was Mr. Walter Engels, the manager of the legal department of the Borden Co.; and in that connection I would like to offer in the record here, to substantiate that, a letter written by Walter Engels, who signed

himself "The Borden Co., manager legal department," on the letterhead of the Borden Co. and dated December 31, 1920, to Mr. R. W. Balderston, 721 Heed Building, 1215 Filbert Street, Philadelphia, Pa.

"Dear Sir: Referring to our talk the other day, I am inclosing herewith a rough draft of proposed bill for Pennsylvania, which will serve as a starter. I will be glad to have any comments that occur to you and will give further thought to any revisions you think desirable. I also inclose full copy of the 'Hebe' decision.

"Very truly yours, The Borden Co., Walter Engels, Manager Legal Department."

I will file that with the committee.

Mr. Urion: That was in connection with legislation in Pennsylvania?

Mr. McKee: Then pending in the State of Pennsylvania. The only States which have legislated directly upon the subject of compounds, have enacted any legislation which prohibits it by a direct enactment, are the States of New York, Wisconsin, and New Jersey. The law passed at the last session of the Legislature of the State of New York prohibits the manufacture and sale of milk in its various forms to which any fat has been added other than butter fat so that the resultant product is in imitation or semblance of evaporated milk.

That law has not, to my knowledge, been enforced, and, as I understand, there is grave doubt as to its constitutionality by reason of the fact that in the case of People v. Marks and People v. Gniton it was decided that the words "imitation and semblance" used in connection with a law which prohibits the sale and manufacture of oleomargarine meant a conscious, designed, and intentional imitation. In other words it meant the incorporation in the product of an ingredient placed there solely for the purpose of causing it to resemble the real article.

[fol. 584] The state of California passed a law about two years ago which compelled the manufactures and dealers in evaporated skimmed milk compounds to take out a license. Also in that law they compelled them to color it in such a way that it would not resemble milk.

The court sustained the licensing feature, but did not sustain the portion of the law which compelled the manufac-

turer of it to color it green or pink or some other color to differentiate it from milk. The sale of the product was not prohibited in the State of California, but it does require dealers to take out a license, in much the same way that dealers in oleomargarine in the State of Pennsylvania are compelled to become licensed.

The State of Utah passed a law similar to the State of California. The product is not barred in that State and can be sold provided the dealers desire to take out a license and sell it.

In connection with the States in which these products are barred, I have a circular gotten out by the National Milk Producers' Federation, dated May 22, "Facts about filled milk", in which are pictured the rats used by Professor Erf in making his experiments, which seems to antedate these hearings. In this circular there are 10 reasons why Congress should pass the Voigt bill, by Charles W. Holman, executive secretary National Milk Producers' Federation. "Eleven States that bar filled milk within their borders". In that list are included the States of Oregon, Florida, and Connecticut.

I have caused a letter to be addressed to the attorneys general of those several States asking them if the legislatures of those States had ever passed a law which prohibited the manufacture and sale of the compounds of evaporated skimmed milk and vegetable fat within the borders of those States. I know of my own knowledge that those products were being sold and that we had never received any communication from any law enforcing authority of those States that it was contrary to the law.

I will read into the record the letters received in answer to those letters, which show that there is no law on the statute books which would prohibit it. It may be that the proponents of the bill will say that there is on the statute books of those States a law similar to the law of the State of Ohio, but until that law is interpreted to prohibit the manufacture and sale of evaporated skimmed milk and a finding of fact has been made that Hebe is skimmed milk, the product is not prohibited and can be freely sold.

This letter was addressed to the attorney general of the State of Connecticut, at Hartford, Conn.:

"Will you kindly advise us whether there is any statute or statutes in the State of Connecticut prohibiting the sale

of compounds of evaporated skim milk and vegetable fat, when packed in hermetically sealed cans and plainly labeled as to contents. We would *appreciate very much* as prompt an answer to this inquiry as is convenient to you.

"Thanking you for this kindness we remain, very truly yours."

The reply is dated July 19, 1922, and reads as follows:

"Your letter of July 13, addressed to the attorney general has been referred to this department for reply.

"There is no law on the statute books at the present time which will prevent anyone from selling compounds of evaporated skim milk and vegetable fats when packed and labeled as stated in your letter.

"We are sending you under separate cover copy of the dairy and pure food laws of this State, also copy of the rules and regulations relating to same.

"Very truly yours, Thomas Holt, Commissioner."

Mr. Holt is dairy and food commissioner of the State of Connecticut.

We addressed a similar letter to the attorney general of the State of Florida, at Tallahassee, Fla., and received this reply:

"Replying to your letter of the 13th inst., addressed to our attorney general, will say that we are handing you herewith copy of a law passed by the last session of the Florida Legislature relating to the sale of milk and milk products, but you will note that the same was not placed under the jurisdiction of any particular official for enforcement.

"William A. McRae, Commissioner."

There is attached here a copy of chapter 8534 of the laws of the State of Florida, which does not contain any reference to the manufacture or sale or distribution of skim milk compounds.

A similar letter was addressed to the attorney general of the State of Oregon, under date of July 13, and his reply under date of July 17 reads as follows:

"In response to your request of July 13 for information as to whether there are any statutes in this State prohibiting the sale of compounds of evaporated skim milk and

vegetable fat when packed in hermetically sealed cans and plainly labeled as to contents. I beg to advise that sections 8672, 8674, and 8707, Oregon laws, are the only provisions of law which cover this matter.

"I. H. Van Winkle, Attorney General. By J. A. Benjamin, Assistant."

And here is a copy of the Oregon law attached, which contains nothing which prohibits the manufacture and sale of evaporated skim milk compounds.

I will file this correspondence with the committee.

This document ("Ten reasons") was given wide circulation throughout the country, and we feel, and I think with justice, that this statement was made for the purpose of influencing people in favor of the Voigt bill by showing them that all of these States had passed these laws prohibiting the sale of these products for the reason that they were adulterated and deleterious to health. I would like to say to the committee that we have never had it come to our knowledge that our product, Hebe, was being used as an infant food, except in two cases. In one instance a woman sent us a picture of her child, stating that she had been feeding it Hebe, calling attention to the fact that it was a very fine specimen of a child. In reply to that letter we wrote and told her that we did not manufacture or advertise or sell or offer for sale the product as an infant food, and advised her to feed her child on whole milk if she could obtain it, and if not upon evaporated milk. We never attempted to check the source of this letter or the purpose which inspired its writing.

In another instance, if I remember correctly, but I am not absolutely positive of this, we received a similar communication with a picture of a very healthy looking baby, and the woman who wrote the letter offered to sell us the picture of the child and give us a recommendation. Letters of that kind, however, are often received by the manufacturers of foods, and in many instances are written by people who are not the parents of the child and simply get a picture of a good husky youngster and send it in and try to get $10 for a letter of recommendation. I think that that is very well known to manufacturers in the food manufacturing business. And I will say to this committee that if it was a fact that this product was being used as an infant food, if there was any

evidence tending to support that position, and if it could be shown that any harm had ever resulted to any person from the use of it, we would be the first ones to withdraw that product from the market.

The charge that has been made that we entered into the manufacture of this product because there was an unreasonable profit in it is absolutely and maliciously false and can not be substantiated. I want to say to this committee that there has been no more profit made in the manufacture of this compound than in the manufacture of evaporated milk. As a matter of fact there have been times, as it occurred in the last year, when there was more profit in the manufacture and sale of evaporated milk than there was in the compound. The difference between the price which was obtained for the butter fat and the cost of the oil that was substituted for the butter fat, vegetable fat was always taken up by the difference between the selling price of the evaporated milk and the selling price of the compound. That has, of course, varied at times, depending upon market conditions, but I put into the record when this bill was before the House committee a statement showing exactly the cost of the compound and the cost of the evaporated milk; and I will not burden the committee with that statement here, because that is already in the record.

I would also like to state this to the committee, and, that is, that it has always been the attitude of this company to not only conform to the laws and regulations with respect to the manufacture and sale of this product, but we have tried to get behind laws which would regulate the manufacture and sale of this product, not only by the manufacturer and wholesaler but by the retailer also. We have offered amendments to the dairy law which would make it a misdemeanor punishable by fine and imprisonment for a retailer to sell or offer for sale these compounds as or for evaporated milk.

Last year, when this matter was before the Legislature of the State of New York, and with grave doubt of the proponents of the bill on account of its constitutionality, I suggested that the bill be amended so as to prohibit the manufacture and sale of compounds of condensed skimmed [fol. 585] milk and vegetable fat when sold as and for milk. That would make the law constitutional and enforcible. The amendment was lost before the Senate committee by one vote.

I repeat that it is the policy and desire of this company to make this product stand squarely on its own feet. We believe that there is a great possibility for this product. We believe that the sale and distribution of it can be confined to the purposes for which it is manufactured and sold, and we say that when this product is advertised in a national way, and people see from day to day, from week to week, from month to month, that it is advertised as a cooking and baking ingredient and should not be used for infant food, people are bound to be educated to the purposes for which the product is manufactured. I have failed yet to hear any testimony from the mouth of a bona fide consumer, in any legislative hearing or in any court, who has gotten up and said, "I have gone into a grocery store and I have been defrauded and imposed upon. I have asked for evaporated milk and I have been handed out these compounds."

In the State of Wisconsin there was not one bona fide consumer put upon the stand who would give any testimony of that kind, although the product had been sold in that State for six years. There was not a physician put upon the stand who would testify that these products were other than wholesome and nutritious articles of food.

I would like, now, to call the committee's attention to this. I don't believe it has been. Here is a product, sweetened milk, which is made of whole milk to which 42 per cent sugar is added. Here is a product packed in the same sized can, which contains skimmed milk to which 42 per cent sugar has been added. It is slightly smaller, and I think contains about an ounce less of the product. I assume that it is made of the same materials and contains the same sugar content, with perhaps a small addition of fat. One is sold and advertised as an infant food, and is the one which was the subject of discussion by physicians who have been before the committee. Now, the charge has been made that by reason of the fact

Mr. Bryan: You don't mean to infer that the Eagle Brand is skimmed milk, do you?

Mr. McKee: No. I should not have said that. I withdraw that. I thought I had in my hand the other sweetened milk made by the Borden Co., which is not advertised as an infant food. I wish to withdraw that. That was an inadvertence upon my part.

Mr. Bryan: Eagle brand contains all the milk fat. That is a fact, is it not?

Mr. McKee: Yes; the 58 per cent, less the sugar, that is in here. The milk that is in here contains all the milk fat.

Mr. Bryan: Have you ever seen Borden's sweetened skim milk upon the market?

Mr. McKee: No.

Mr. Bryan: Do they make one?

Mr. McKee: I don't know. I merely mention that in that connection to meet the argument that has been made before this committee that it can be used as an instrument of fraud. That was the only thing upon which the case in Ohio rested.

The claim has been made that people do not read the label, therefore they buy this product and use it in the place of evaporated milk. If that is true, gentlemen of the committee, by what course of reasoning can it be said that they will read the label in this instance and will not read it in this? Is the opportunity for fraud not just as great in these two products as it is in these two products?

Mr. Jackman: Mr. McKee, "this instance" does not identify the products for the record.

Mr. McKee: One of these products is the Eagle brand of sweetened condensed milk, which is the whole milk preserved with sugar and has 42 per cent of cane sugar, and the other product is the Tryme brand, which is composed of skim milk and cane sugar. I assume that the proportion of cane sugar and skim milk is the same as the whole milk product. They are packed in the same size can.

Mr. Urion: I would like to ask you whether that last product comes within the provisions of the Voigt bill?

Mr. McKee: It does not.

I have right here in my hand a product labeled "Laurel," which is a product of evaporated skimmed milk put up by the Laurel Co., Seattle, Wash., packed in the same size can as the whole evaporated milk. This contains nothing but skim milk. This bill will not prohibit the transportation in interstate commerce of this product, but if we add to it food value by adding to it 7.8 per cent of a vegetable fat and increase its food value, then it comes under the condemnation of the act.

Here is another sweetened skim milk.

Mr. Urion: What is the fact in reference to that?

Mr. McKee: That is skimmed milk to which sugar has been added.

Mr. Urion: Does it come within the provisions of the Voigt bill?

Mr. McKee: It does not come within the provisions of the Voigt bill.

Here is another brand, the Norny sweetened milk and sugar, which does not come within the provisions of the bill.

Here is what I want to call your particular attention to, the skim milk called the Square brand, which was the subject of the legislation of the State of Maryland, and here is something, gentlemen, that will be very interesting.

After the State of Maryland had been petitioned to prohibit the sale in the State of evaporated skimmed milk and had been asked to interpret the law to prohibit the sale of compounds such as Hebe, the legislative committee of the State, at the behest of interests which I understand were also interested in securing that interpretation of the law, amended the dairy law of that State so as to permit the sale of skimmed milk when packed in containers holding not less than ten pounds. That meant that the baker, the confectioner, and the candy maker could make his pies and his cakes and his cookies and his candies, which, it has been testified here, have been fed to children, out of skimmed milk, and those products pass along to him in a disguised form, but if the housewife wanted to use that same product in making the same articles which I have described, and practiced the same economies which were granted the wholesaler, it was denied to her. In other words, for the wholesaler it was a pure, wholesome, nutritious article of food, and in the case of the housewife it was deleterious to health.

Senator Ladd: Was that prohibited from sale to the housewife, or do you mean because it was in the larger sized packages she was unable to use it?

Mr. McKee: She could buy it, of course, in the 10-pound package, but it would be impractical for a housewife to buy 10 pounds of skimmed milk. If she opened the can, unless she used it within a very reasonable time, it would spoil. The effect of it, Senator, was to take it away from the housewife.

I have in my hand here another brand of sweetened condensed milk called the Challenge brand. This product is made by the Borden Co. I am not advised as to the exact net contents of the can, but it says on the outside of it "net 12½ ounces." The net weight 15 ounces. In other words, this product here is two and a half ounces more than this. In other words, the net weight of the Eagle brand is 15 ounces, and the net weight of the Challenge brand, made by

the same company, is 12½ ounces. It is my information that the contents of these cans are practically the same.

Mr. Urion: You mean as to product?

Mr. McKee: Yes. There may be a slight difference in favor of the Eagle brand as to the fat content, but it would be immaterial so far as the matter of its cost would be concerned.

Mr. Bryan: You have no personal knowledge of that, Mr. McKee?

Mr. McKee: No. Do you deny it?

Mr. Bryan: I don't know. I am a lawyer. I am not a chemist.

Mr. McKee: The Eagle brand retails for 25 cents.

Mr. Urion: Those were actual purchases in Washington?

Mr. McKee: Yes.

And the Challenge brand sells for 15 cents. If the mother wants to buy and use this product for the purpose for which it is extensively advertised and sold and on which distribution is secured, to feed her infant, she has to pay 25 cents for 15 ounces. If she wants to buy it for some other purpose I presume she can buy this one for 15 cents.

All these products here are for the purpose of showing to the committee the great number of infant foods that are on the market, and for the purpose of showing to the committee that none of these infant food preparations can be used unless the directions which are printed in small type on the package are read. In order to use the Eagle brand with a minimum of danger the directions on the can must be very carefully read. The size of type that is used I would call to the attention of the committee.

[fol. 586] I say that if this product is going to be legislated off the market upon the theory that people do not read labels, then I believe that the force of the statute should be applied to a product of that kind which the testimony in this hearing shows is being used as an infant food and has caused great trouble and distress among infants.

We have here a package called "Borden's baby brand," sold in glass hermetically sealed, net weight 12 ounces. This sells for 35 cents. The directions which must be read in order to use the product so that it will not injure the health of the child to which it is fed are small, in fact so small that it is almost impossible for a person with good eyesight and fair education to read them.

Mr. Urion: What is the color of the content?

Mr. McKee: The color of this is a brownish color, which of course will not be affected by the Voigt bill.

Mr. Urion: Not being in semblance of milk?

Mr. McKee: Not being in semblance of milk.

I think the attention of the committee has been called to this product called "Borden's chocolate malted milk," which says: "Take one quarter glass of cold water, add the chocolate flavor malted milk, stir into thick paste, then add balance of water slowly, stirring briskly, or mix with egg beater."

It was testified yesterday in relation to this product that it was not in semblance of milk; that it contains no butter fat, that it is made of skimmed milk and is to be used with water, and certainly lacks the nutritive element of malted milk, for which purpose it was put on the market.

Mr. Urion: And what is it that is used to color it and take it out of the semblance of milk?

Mr. McKee: The analysis shows that it is cocoa or cocoa flavoring. I don't know exactly what the prescription of that is. That is in the record. It is not chocolate.

Mr. Urion: I want to ask you if that product is being advertised by the Borden Co. as food for children?

Mr. McKee: I show you here an advertisement which is appearing in the street cars in the city of New York and upon all of the billboards.

"Easy to prepare at home. Borden's chocolate malted milk, like the soda fountain serves. Build the health and strength of your children with a highly nutritious food drink that is a delicious chocolate treat."

Mr. Urion: Does that say "Chocolate flavored"?

Mr. McKee: It says "Chocolate flavor malted milk."

My understanding is there is no chocolate in it.

Mr. Bryan: That says "Chocolate flavor" does it not?

Mr. McKee: Yes; not cocoa flavor.

Mr. Bryan: I never saw or heard of the thing before I came here.

Mr. McKee: Here is a brand called Klim, which is a powdered skim milk, net weight 1 pound.

Mr. Urion: Does that come within the provisions of this act?

Mr. McKee: No, sir. And also Klim powdered whole milk packed in the same sized container, the only difference

being that one has a yellow label and the other has a green label.

Mr. Urion: Point out the similarity in the labels or the difference.

Mr. McKee: The only difference is in the color of the label. They are exactly the same, one being whole powdered milk and the other skim milk.

I do not wish to burden the committee.

There has been a great deal of testimony offered here and I certainly do not wish to go over it on this price proposition. I could make a statement with reference to that. The only thing I want to say in a brief way is that in the last year and a half there has been a very rapid decline in the price of evaporated milk, not only evaporated milk, but in all food products. Evaporated milk has dropped in price over a dollar a case. There has been a comparable drop in the price of these compounds.

We find in the merchandising of the product that a merchant will have a slow turnover on the compound and a rapid turnover on his evaporated milk. He usually tries to get his cost out of his product, and he might buy evaporated milk to day at a lower price and still have some of the compound left at the higher price, and for a time the evaporated milk may sell at the same price that the condensed milk does; but the findings of fact in the Wisconsin case on that matter were thoroughly gone into. Judge Zimmerman, the referee, found as a matter of fact that the average difference in the price at which the manufacturer sold these products was $1.25 more for the evaporated milk than the compound and, as I recall, the average difference in price which the retailer charged was from 2 to 3 cents.

Now, I just want to state our position with reference to this matter.

Mr. Urion: I want to call your attention to some letters you have there from Doctor Allsburg and others.

Mr. McKee: I would like to offer for the record a letter from C. L. Allsburg, Chief of the United States Department of Agriculture, Bureau of Chemistry, dated June 3, 1921.

Mr. Urion: I suggest you read that letter.

(Mr. McKee read the letter referred to, as follows:)

United States Department of Agriculture,
Bureau of Chemistry,
Washington, D. C., June 8, 1921.

Mr. Ralph W. Jackman, Madison, Wis.

DEAR SIR: Replying to your letter of the 13th instant, permit me to state that in the Department of Agriculture's Bulletin No. 505, Langworthy and Holmes report the results of experiments conducted on the digestibility of some vegetable fats, including coconut oil. We are sending you herewith a copy of this bulletin.

You state that you desire to ascertain the attitude of the department toward products made in part from milk and in part from cocoanut oil. So far as I am aware, the department has taken a stand with reference to these products only in so far as the application of the food and drugs act to them is concerned. The food and drugs act contains no provision restricting the interstate shipment of any wholesome food product that is not labeled in a manner to mislead the purchaser and is not otherwise misrepresented. Inasmuch as products of the type under discussion contain nothing deleterious to health, the control exercised over such products under the food and drugs act has of necessity been limited to their manner of labeling.

In reply to your other questions, it may be said that provided that first class coconut oil is used in manufacturing the food products mentioned in your letter, we know of no reason why such products should be deleterious to the health of the grown normal person. Moreover, such a product may have a high nutritive value. A milk product in which the natural butter fat has been substituted, wholly or in part, by a vegetable oil or fat, such as coconut oil, does not have the same nutritive value as one in which no such substitution has been made, since butter fat is ordinarily rich in fat soluble vitamines, while coconut oil contains little or none of this vitamine.

Respectfully, C. L. Alsberg, Chief.

Mr. McKEE: We have a letter here from the health department of the city of Boston, signed by William C. Woodward.

health commissioner, addressed to N. W. Ayer & Son, 30 State Street, Boston, Mass., which reads as follows:

"Inquiries made by the 19 nurses in service of the Boston Health Department, engaged in field work with respect to communicable diseases and infant welfare, during the past four days, for the special purpose of determining whether any of the compounds now on the market made up and advertised as being a mixture of milk and vegetable oils were or were not being used for the feeding of infants, have failed to disclose a single instance in which any such compound was being so used. In no case whatsoever was such use found, either the intentional or knowing use on the part of the mother or other person having care of the baby or invalid, or the ignorant use due to any misunderstanding on the part of any such person.

"It is understood that this letter is for your information and that it is not to be used for advertising purposes."

We have a letter from the American Institute of Baking, Minneapolis, Minn., dated May 20, 1921, addressed to Ralph W. Jackman and signed by H. E. Barnard, director, and also a letter from the University of Wisconsin, College of Agriculture, dated August 13, 1920, addressed to Mr. John L. Clough, Indianapolis, Ind., and signed by H. Steenbock, professor of agricultural chemistry, which we offer for the record.

(The letter of the American Institute of Baking is as follows:)

American Institute of Baking,
Minneapolis, Minn., May 20, 1921.

Mr. Ralph W. Jackman, Madison, Wis.

DEAR SIR: Your letter of the 13th instant has just been brought to my attention, together with a letter from my friend, B. N. Wilson, of the Indiana Condensed Milk Co.

I am sorry to hear that any bill is pending before your legislature which prohibits the manufacture or sale of evap- [for. 587] orated skimmed milk when mixed with coconut oil. It would be just as reasonable to prohibit the sale of pork produced by cross breeding a Chester White with a Duroc. I can not understand how the legislation makes any headway at all with intelligent men. Of course, the reason

for the introduction of such a bill is obvious, but every law of economics, nutrition, and fair play is opposed to such legislation.

Such products as Hebe and Nutro are just as satisfactory foods as mashed potatoes or bread and milk. Of course, they do not contain the so-called fat soluble vitamines present in quantities in butter fat produced from grass-fed cows. In other words, it is not a complete food, nor is there any article of the diet which is a complete food. Coconut oil is an ideal fat and I believe that within a few years it will be used in enormous quantities for all sorts of food purposes. Why shouldn't it be so used? It can be produced at a very low price. It is probably the cheapest food product grown, or putting it this way, one can buy more calories in the form of coconut oil than in any other way for the same money. This may not be the case to-day, because the industry is new, but no cow or hog, or even the corn or cotton plants grown on our expensive farms, can compete with the coconut palm in the cheap production of a high-grade fat.

The milk manufacturer who sells his butter fat to be churned into butter and then replaces the fat with this wholly satisfactory oil is performing an important economic function.

This point can not be stressed too strongly. Of course, the product is not a baby food and ought not to be sold as a baby food. This is true of practically every other food product with the exception of clean, safe cow's milk.

I am very much interested in your proposition and I hope you can defeat the proposed destructive legislation.

Very truly yours,

H. E. BARNARD, *Director*.

Mr. Holman: Please state the nature of the Steenbock letter.

Mr. McKee: Do you want me to read that?

Mr. Holman: Yes; we would like to have that read.

Mr. McKee (reading): "A letter signed by you and addressed to the Food Experimental Station, University of Wisconsin, has been referred to me for answer. At this station we have carried out no experimental work with the food product that you mention, but on general premises it can be said that the milk food as you describe it is a valuable food and ought to be just as digestible as milk it

self. The danger in the use of the product comes when the customer goes to the grocery store and asks for condensed whole milk and is given instead by the grocer something just as good. This is the procedure which condemns the use of the product which you mention and is something which the manufacturers of products such as you suggest have not been very active in preventing as it might necessarily interfere with their sales. In its proper place it is no doubt a valuable article, for, as your say, it contains practically all the carbohydrates, proteins, and minerals that were originally in the milk. It also contains the water-soluble vitamine, but no one is yet in position to say how much of the original fat-soluble vitamine content of the milk it contains. This is a matter which has not yet been studied in any laboratory so far as I am aware. At any rate if it has I am perfectly willing to stand on the statement that such claims as have been made in regard to the relative distribution of the fat-soluble vitamine between the butter fat and the skim milk are to be given very little credence. There is, however, no question but that some of the fat-soluble vitamine is still found in the skim milk.

"Hoping this information will be of value to you, I am,

"Sincerely yours,

"H. STEENBOCK, *Director of Agricultural Chemistry.*"

Mr. Holman: He is chief of that department?

Mr. McKee: I think he is. Steenbock is the man who was quoted by Professor McCollum on his experimental work.

I have a copy here of an article which appeared on June 2, 1921, in the Journal of the American Medical Association, published under the auspices of the board of trustees of that association, and that is the doctors' magazine of this country and is very careful about the statements that it makes.

"Until within recent years vast quantities of skim milk were wasted or its food value used in uneconomical and unscientific ways. Then there developed an industry for the purpose of making that skim milk more available to the consuming public by adding to it edible fats or oils from other sources. These milk compounds, obviously, could not and did not take the place of milk as an infant food; they did, however, furnish an inexpensive and valuable

food, and because of these qualities they quickly obtained public favor. Since they have become popular or possibly they have become popular certain competing interests have attempted to bring about legislation which, for all practical purposes, would eliminate the milk compounds from the market. Such legislation was attempted in the States of Washington, New York, New Jersey, and Pennsylvania, but the bills failed of enactment. More recently such legislation has been pushed in Wisconsin and the law has passed both houses of the Wisconsin legislature.

"The fight is now being carried to Congress and three bills have been introduced which, if enacted, would practically destroy the milk-compound industry of the United States. With the trade fight for such it is the medical profession is not concerned. Those that are attempting to destroy the business, however, are doing so largely under the guise of protecting the public health. The arguments are fallacious. Such compounds of skimmed milk and vegetable oil as are on the market, so far as we know, are frankly and honestly labeled and are advertised for what they are. In at least some instances, the label specifically declares they should not be used for infant feeding, but recommends them for cooking and baking, and expressly defines them as mixtures of evaporated skim milk and vegetable fat. In skim milk we have protein in one of its most valuable forms. If wholesome edible fats of vegetable origin can be added to skim milk and thus make mixtures that are available as inexpensive food or cooking accessories, every consideration of public health and economics favors such mixtures, provided they are frankly and honestly labeled for what they are. The present legislation pending in Congress directed toward the extermination of milk compounds of this character is without justification from the public health standpoint."

Mr. Bryan: This was June 2, 1921. Don't you think that situation has changed?

Mr. McKee: You can state it if you know.

Mr. Bryan: I am asking you. I don't know.

Mr. McKee: You know. Don't try to camouflage it. I would like to read into the record an affidavit of Dr. L. Emmett Holt.

Mr. Orion: First tell, if you please, who Doctor Holt is.

Mr. McKee: He is a famous baby specialist and is the

author of several well-known books, which are and have been in the homes of the American people where there have been infants for, I guess, two generations. Care and Feeding of Infants, by Dr. L. Emmett Holt, is a standard work on this subject.

I want to say that Doctor Holt is a man now about 70 years of age. His residence is in New York, but at the present time he is in Nantucket, and expressed his regret of his inability to come to this hearing, but said that he could not possibly make the trip.

This communication, which is attached to his affidavit, is addressed to the Committee on Agriculture, United States Senate, Washington, D. C., and reads:

"Gentlemen, I very much regret that the state of my health does not permit me to make a trip to Washington at this season to appear in person against the Voigt bill. Therefore I am inclosing, in care of attorneys for the Hebe Co., an affidavit of my professional opinion, which I trust you will give due consideration."

That is dated July 24, 1922.

(Mr. McKee read the affidavit referred to, as follows:)

The chief characteristic of milk compound is that a vegetable fat has been added to skimmed milk. The sugar, the protein, and the mineral salts are in the same proportion and in practically the same form as in evaporated milk.

Vegetable fats are useful and valuable foods in spite of the fact that they do not contain vitamine A. But it is not necessary that this be supplied in milk. It is contained in other foods such as eggs, green vegetables, most meats, butter, etc. These furnish an abundant supply for all the needs of the body.

Skimmed milk is a very valuable food, and the restrictions that have often been thrown about its sale have no justification in the protection of public health. Not to make use of this valuable and cheap food in the present condition of food scarcity and high cost is most unreasonable. Particularly is this true of protein food, of which skimmed milk at the present time supplies without doubt the cheapest and best form available.

As to the effect of the process of preparation of milk compound upon the vitamines, it should also be remembered that in pasteurizing, boiling and sterilizing milk, Vitamine C is destroyed; but this fact does not weigh against the great advantage of heating milk for its preservation and for the protection it affords against diseases such as typhoid and tuberculosis. This lack of vitamine C in heated milk can be easily and completely supplied by adding such things as orange juice or tomato juice to the diet.

[fol. 588] The preservation and storage of milk and other foods which the conditions of modern life in our large cities have made necessary are of immense advantage. By these means, their much more extensive use is made possible not only here but all over the world. For instance, in white wheat flour from which we make our bread, practically none of the important vitamine B remains, although it is abundant in whole wheat flour. But whole wheat flour will keep but a short time, only about a month, while white flour keeps indefinitely, certainly for five or six months. This makes it possible to transport it such long distances and to store it in such quantities as to insure us always against a bread famine. The benefit to the health of both adults and children of food products that can be stored for long periods is very great. We would not prohibit their manufacture and use if we could.

What are the objections or the dangers if there are any? They lie in their misuse, or their use without knowledge or appreciation of the fact that such foods are not complete foods. What they lack must be supplied by other articles in the diet. So long as they are properly labeled, such misuse is not likely to occur. They certainly contain nothing that is injurious, now that sterilization has taken the place of the addition of preservatives. But sterilization does do some harm, the nature of which is now perfectly well understood.

Is it possible that such a product as milk compound would be positively injurious to infants, if it were used by an ignorant mother as a substitute for fresh milk, even though the label advises against such use?

The product contains only the constituents of cow's milk: skimmed and sterilized, and vegetable fat, neither of which could harm infants, even though used for considerable

periods, i. e., many weeks. My own experience accords with that of others that vegetable fats are valuable foods for infants; that they are in most cases absorbed quite as well as the fats of milk and that their effect upon the weight of a child and the absorption of mineral salts, particularly lime salts, is practically the same as that of milk fats.

To prohibit the manufacture and sale of such a food product as milk compound on the ground that its use is against public interest and prejudicial to health is illogical, not to say absurd. The same objections may be urged against practically any form of canned or preserved food now on the market.

Not their use, but such a prohibition of their use as is proposed in the Voigt bill is against public interest and public health. It is the misuse of this and similar products which might come from improper labeling or the deception of the public through fraudulent advertising claims that harm is possible.

The milk compound known as Hebe, a can of which I have before me, seems to me to be labeled in such a way as not to mislead the public.

STATE OF CONNECTICUT,
County of Litchfield, ss:

Before me, a notary public for the Commonwealth of Connecticut, residing in the county of Litchfield, personally appeared L. Emmett Holt, M. D., who, being duly sworn, deposes and says that the statement given above is true to the best of his knowledge and belief.

L. EMMETT HOLT, M. D.

Sworn to and subscribed before me this 22d day of July, A. D. 1922. In testimony whereof I have hereunto set my hand and seal the day and year aforesaid.

[SEAL.] ROBERT J. BENHAM, *Notary Public.*

Commission expires February, 1927.

Mr. McKee: There has been filed with the committee an affidavit prepared by Prof. Lafayette B. Mendel, which I will not read.

Mr. Bryan: Is that the same affidavit that was filed in the House hearings?

Senator McKinley: No. We put that in the record yesterday; that is, I suppose it is the same one.

Mr. Bryan: May we see it?

Mr. McKee: Certainly.

He was unable to appear before this committee. He prepared this affidavit, which you will note is of recent date, by reason of the fact that he could not appear. I talked to him over the long-distance telephone. He is at Delhi, N. Y. He told me to say to the committee that he did not appear because he was physically unable to do so; that he had three or four bandages around him; had not been out of the house, except to take an automobile ride on the smooth cement road, for three weeks, and could not say at this time when he could appear. He said, however, that if the committee would appoint a representative of the proponents of this bill and a representative of those opposed he would be very glad indeed to submit to interrogation or cross-examination at Delhi, and would also be very pleased to have Professor McCollum present, if he desired to be there.

In closing I will have to omit many of the things that I would like to say to the committee, but I would like to put this into the record, and that is in regard to the production and the extent of the industry at the present time.

In the United States in 1921, according to the report of the Department of Agriculture, as set forth in the Market Reporter, published by the department at Washington on June 10, 1922, there was produced 98,862,000,000 pounds of the whole milk. I am giving that in round figures. Of that amount 45.6 per cent was used for household purposes as fresh milk and 47 per cent was used in manufacturing purposes, 4.3 per cent was fed to calves, and 3 per cent was waste and unspecified uses.

Of the amount used in the manufacture of milk products there was 3.783 per cent of the total milk produced in this country used in the manufacture of condensed and evaporated milk, and in those figures is included the amount used in the manufacture of milk compounds. I have not the figure with me, but it is my understanding that there was 56,000,000 pounds of compound manufactured in 1921. Is that correct?

Mr. Jackman: Approximately.

Mr. McKee: So that of the total amount used in the

condenseries and by the manufacturers of evaporated milk, less than 5 per cent of that amount went into the manufacture of these compounds.

There was utilized in the manufacture of butter about 33,000,000,000 pounds of milk, which produced 1,700,000 pounds of butter.

If all of the cream taken from compounds manufactured in 1921 was made into butter—and there was a large portion, but not all of it—it could not have been over 6,500,000 or 7,000,000 pounds at the outside.

Senator Kendrick: Out of nearly a billion pounds?

Mr. McKee: Yes.

Mr. Urion: More than that. Two billion.

Mr. McKee: The amount is so small that it is insignificant. It is a billion seven hundred million, and there is seven million that is to be charged to the manufacturers of compound if every pound of cream that came out of the milk was used in butter. The amount is so small that it is insignificant, and the amount of compounds so manufactured last year was so small that it could not possibly have any effect at all upon the industry.

Gentlemen of the committee, in closing I want to say that we manufacture and sell a brand of sweetened milk under the trade-mark Red Cross that has been on the market for a good many years, and I will say to this committee that I was very much surprised to hear the testimony given here with respect to the disastrous consequences which have attended upon the use of sweetened condensed milk in the feeding of infants. We want to take this position with respect to the Voigt bill, and that is that if this Congress is going to legislate and feels that it is necessary to legislate to protect the lives and the health of the infants of this country against the use of these products, against the use of compounds on the one hand which are labeled in such a way that they are warned not to use them, and against this sweetened whole milk, which is directly recommended as an infant food and that is so used, then we believe that this bill should be so amended as to include within its provisions every milk compound upon the market. The danger in the use of this sweetened milk is greater than it is in the matter of compounds. The evidence abundantly shows that. We therefore take this position, that we are willing to bow to the will of this Congress if they believe that it is going to be to the best interests

of the consumer and of the producer to absolutely prohibit the manufacture and sale of milk except in the form in which it comes from the cow with part of the content taken out.

Senator Kendrick: Would you object to the use of sugar?

Mr. McKee: I don't see why not. It is a compound.

Senator Kendrick: But my question is if we eliminated all of these that contained any other ingredient——

Mr. McKee: Any foreign substance.

Senator Kendrick: Except sugar; would you object to the use of sugar?

Mr. McKee: I think sugar is a compound, and the use of those products has been shown to be harmful. As I say, we manufacture sweetened milk and put it on the market.

Senator Kendrick: My question might have been more clearly understood if I had said, "Would you prohibit the use of sugar in the preparation of milk?"

Mr. McKee: I don't believe that is necessary. We don't urge that. I believe those are matters which can be cured by regulation. I believe that laws can be passed to regulate the manufacture and sale of a product which is inherently wholesome and nutritious, and our position is this: We feel that it is unfair and unjust to pass a law [fol. 589] which is going to destroy one industry when the record shows that the product is a wholesome, nutritious, article of food, and that the only thing the matter with it is that it has not the same nutritive value as some other food, to pass a law to say you can not sell milk if you add to that milk other than butter fat. There would be just as much justice in enacting a law which would prevent the addition of any sugar to milk excepting sugar of milk.

Our contention with respect to these laws that have been passed——

Senator Kendrick: If I may interrupt you just a moment, is not the difference, the point of contention involved, in substituting something in the milk that is not as good as the article that is supposed to be in it? Now, as an illustration, you take sugar. If you said that beet sugar is not as good as cane sugar and that it was not therefore nutritious, and drew the line there, would it not be nearer the point of controversy involved here against your commodity?

Mr. McKee: I see your point in that, but you take, for instance, adding it to skim milk. You take skim milk and take the butter fat out of it——

Senator Kendrick: After you remove the butter fat you substitute in lieu of it a fat that is not, according to the contention, equivalent to the other.

Mr. McKee: We do not claim that it has the same nutritive value.

Senator Kendrick: And my question is if that is not the point on which this controversy revolves, rather than a question of adulterating the milk with some other commodity?

Mr. McKee: The only thing is that we feel that this law, Senator, is discriminatory. In the first place, the only evidence of missale of the product is on the part of a few retail grocers, and we do not feel that the right of the manufacturer, the right of the consumer to determine for himself whether he wants to use this product when it is properly labeled should be based upon the acts of a few unscrupulous dealers. We say that laws could be passed which would punish a dealer who commits a fraud on the public. We never have been adverse to regulation. We are perfectly willing to have this industry regulated, provided the regulation is not prohibitory. The misuse is no justification for the prohibiting of the manufacture and sale of a wholesome article of food, and I think it will be admitted that this product is a wholesome article of food. The objection to it is based upon comparative nutritive value. The opportunity for fraud is just as great in the selling of whole sweetened milk and skimmed sweetened milk. If the consumer does not read the label the opportunity of the dealer to substitute this product of skimmed milk for this one of whole milk is just as great. It would be unjust, we believe, to deprive us of the right which we believe we are entitled to to engage in a legitimate business, and take from the market this compound which we are manufacturing and this sweetened milk which we are manufacturing; nevertheless, I want to say to this committee that we are willing to make that sacrifice provided the law is going to apply equally and fairly upon all people engaged in the industry and is not going to pick out this one branch of the industry and say that you can no longer exist.

I thank you.

Mr. Bryan: Mr. McKee, you have offered in evidence here a photostatic copy of a letter dated December 21, 1920, from Mr. Walter Engles, of the Borden Co., to Mr. R. W. Balderston.

Mr. McKee: Yes.

Mr. Bryan: Would you mind telling the committee how you obtained a copy of that letter?

Mr. McKee: On our return from Pennsylvania, where we had a very prolonged hearing and papers were scattered over the desk, one of our men on returning to Chicago, on going over his papers, found this letter.

Mr. Bryan: You knew that it was a private communication, a personal letter, if I may say, from one person to another?

Mr. McKee: I knew it was a communication signed by the Borden Co., and showing his interest in that particular legislation.

Mr. Bryan: You felt it entirely in consonance with the proper principles of ethical conduct to have a copy made——

Mr. McKee: Absolutely.

Mr. Bryan: Under these circumstances, and to make use of it in a proceeding of this kind?

Mr. McKee: Well, I don't think that you are in any position to criticise, Mr. Bryan.

Mr. Bryan: Answer the question, Mr. McKee.

Mr. McKee: I think so.

Mr. Bryan: I am tired of these insinuations which they have not offered one word to substantiate. I will deal with that later.

Mr. McKee: In this connection I want to say that you appeared in Baltimore and I asked you whom you appeared for and you said for private interests, and I asked if you appeared for the Borden Co. and you said you did not.

Mr. Bryan: I will state that is absolutely a misstatement. In Baltimore I appeared for private interests. I stated so then and I state so now. In this proceeding I appear for the Borden Co. We will substantiate that at the proper time.

Mr. McKee: All right; I hope you will.

Mr. Holman: I would like to inquire, if the gentlemen on the other side have closed their case?

Mr. Jackman: I don't think we have anything more.

Senator McKinley: Mr. Holman, I would like to ask you a question as representative of the dairy interests.

Mr. Holman: All right, sir.

Senator McKinley: Do you feel that it is detrimental to the dairy interests to sell skim milk?

Mr. Holman: In small packages such as have been shown here to-day of condensed skim?

Senator McKinley: Yes.

Mr. Holman: We don't object at all, Senator, to banning that product.

Senator McKinley: To doing what?

Mr. Holman: To barring it. We feel that there are circumstances whereby this product may be bought and sold just as filled milk is bought and sold, and in the smaller packages we are perfectly willing to take it off of the market. It has been included in some of the State legislation at the request of dairy interests. It will be included in other State legislation now in preparation.

Senator McKinley: Would it not be the proper thing to put it into this bill?

Mr. Holman: We do not object, Senator. We did not draw the bill. We are supporting it. We have no objection whatsoever to its being included in the bill.

Senator McKinley: I rather gathered from the witness who testified, Mr. Miller, that he felt that the skim milk ought not to be put on the market.

Mr. Holman: I gathered from the judge's statement that he felt that the evidence so far is not as conclusive in regard to——

Senator McKinley: No. I mean as a matter of policy and detriment to the dairyman.

Mr. Holman: I gathered that the judge did not object. I happen to know that skim milk is barred in the New York Legislature in the act of this year in packages under 10 pounds. I believe I am correct, am I not?

Mr. McKee: Yes.

Mr. Holman: I think that came at the instance of our people.

Mr. Charles S. Barrett, of the National Farmers' Union, is here.

Senator McKinley: How many more witnesses will you have?

Mr. Holman: There are three witnesses left besides Mr. Bryan. We wish Mr. Barrett, of the National Farmers' Union, to speak for just one or two minutes. He is president of the National Farmers' Union.

Senator Kendrick: It will be entirely all right to put on one or two more witnesses. So far as I am concerned, I am ready to recess until to-morrow morning, or whenever you want to. Senator McKinley can not be here until, I suppose, to-morrow morning at 10.30. I have inquired as to what time he wanted us to reconvene, and you can have one more witness, if you care to, go on this afternoon.

Mr. Holman: Thank you very much. We are in this position, that one of our gentlemen can not be here Monday and the other one can not be here to-morrow, and we will have to counsel, while Mr. Barrett is making his statement, as to policy.

Statement of Mr. Charles S. Barrett, President of the National Farmer's Union

Mr. Barrett: Mr. Chairman, about all the statement that I have to make is that we are for the Voigt bill and my organization is for it. We are all for it.

Senator Kendrick: With or without reservation?

Mr. Barrett: I guess without reservation. I don't know what this bunch here have agreed to. I have just come in and have not heard anything at all.

Mr. Holman: Mr. Bryan will make a short statement.

Mr. Bryan: If the committee please, there has been so much ground covered in these hearings it would be futile, I think, to attempt to review the situation in great detail. There are, however, a few outstanding features of it that I do desire to cover.

Senator Kendrick: May I interrupt you. You will be allowed such time as you require. We intend everyone to have ample time to be heard and to give them opportunity [fol. 590] to explain in detail. Now, my suggestion is that we go on until 4.30, if agreeable, on the condition that it might be more convenient for us all to adjourn at that time, or we could go on later, or we could have you continue at another time, just as you like.

Mr. Bryan: If it could be definitely determined whether we will go on Monday or not, Senator, that would have a bearing on the situation.

Senator Kendrick: Yes; we will go on Monday.

Mr. Bryan: Well, we will then introduce Mr. Balderston for rebuttal testimony.

Statement of Mr. Robert W. Balderston, Secretary Interstate Milk Producers' Association, Philadelphia, Pa.

Mr. Balderston: The question was raised this morning as to the comparative retail selling prices of evaporated milk and of the compound, and also in questions addressed to Mr. Miller, and he showed you a photograph which is a duplicate of one already in the record showing the ranges of prices of milk bought early in January in New Jersey by agents of the Interstate Milk Producers' Association, which was making investigations for us as to the prices. We did not put any duplicates in, because that would make too large a display, but those which were read into the record this morning, showing the range of prices, there was no evaporated milk bought in that district below 9 cents and none above 12 cents. There was no compound bought in that same district below 9 cents and none above 12 cents in the same district of New Jersey.

Miss Edith Powell, one of our employees, made a similar survey of prices in southeastern Philadelphia during, I think it was, the 4th day of January or thereabouts, and the range of prices is as follows: Nyco, 10 cents; Silver Key, 10 cents; Pet, a brand of evaporated milk, 10 cents; Borden's, 10 cents. The range of prices on this whole report is, compounds from 9 cents for Silver Key and for Hebe to 13 cents, and in one store for Majal——

Mr. Bryan: What is Majal?

Mr. Balderston: A compound.

The brands of evaporated milk bought in the same district during the same period ranged from 10 cents for Borden's, Pet, and other brands, to 11 cents for Golden Key and for Borden's.

To-day, after you asked that question, some of us took an automobile and scouted out around through Washington to find out what was the range of prices in Washington. We first went to the Old Dutch Market, which, as some of you may know, is on Pennsylvania Avenue.

Senator Kendrick: They are scattered all over the city.

Mr. Balderston: There is a large one at No. 622 Pennsylvania Avenue. In the Old Dutch Market I went up to a counter and asked for the cheapest brand of evaporated milk. The boy told me they are all the same price. "All right," I said, "I will take a can of Carnation and a can of Hebe," which, as I could see from the labels attached to the

cans, were all marked 10 cents. In putting it into my pocket he remarked, "I want to warn you that that is vegetable milk, this Hebe." I said, "How so?" He said, "Them's the orders. We are told to be very careful about that."

So I did not buy it under any misapprehension to-day, nor was there any effort to deceive me, nor did I make any effort to try to draw him out.

Mr. Bryan: What price did you pay?

Mr. Balderston: I paid for the Carnation milk in the Old Dutch Market 10 cents, for the Hebe I paid 10 cents, both made by the same company and sold for the same price.

Mr. Bryan: Cans of the same size?

Mr. Balderston: At 622 or 624 Pensylvania Avenue. There is no number on the building, and we could only get the number by tracing back.

There are the cans in my hand. The same size cans, bought in the same store the same day.

Senator Kendrick: Is one condensed milk?

Mr. Balderston: One is evaporated milk. Carnation sterilized evaporated milk, made by the Carnation Milk Co., and the other is Hebe, a compound of evaporated skim milk and vegetable fat, and made by the Hebe Co. which, as Mr. McKee told you, is a subsidiary of the Carnation Co.

Mr. Bryan: Were they in the same display on the shelf?

Mr. Balderston: The shelves had compartments, and Carnation had one compartment, and right alongside was another compartment named Hebe. They kept their various brands in separate compartments.

I also bought, for the information of the committee, a small can of Carnation for 5 cents, which is a 6-ounce can.

Proceeding further we visited a number of stores, largely through the negro quarter of the city, in order to get another class of stores different from the Old Dutch Market, which, as I understand, and from the very appearance of things, caters to people who like very good things, because it is a splendidly equipped store. At no other point did we get any compounds, so that I have no other prices except the 10 cents, but I want to give you now the range of prices of evaporated milk in Washington as compared with the 10 cents for Hebe.

At Ostrow's Quality Market, 1506 Seventh Streets I bought Van Camp's milk for 10 cents.

Mr. Bryan: The same size can?

Mr. Balderston: The same size can.

I bought Rogers's evaporated milk, the same size can, for 9 cents at the Sanitary Grocery Co., Tenth Street and the Avenue, over near the Old Dutch Market.

Mr. Bryan: The Sanitary Grocery Co. is one of the chain grocery stores?

Mr. Balderston: One of a chain of grocery stores.

Senator Kendrick: Is that condensed whole milk?

Mr. Balderston: Evaporated milk. That is the whole milk.

I bought at the American Grocery Society A. G. S. evaporated milk, at Marion and P Streets, for 10 cents. They had no Hebe, but they said the price had been 12 cents, but they were out.

Mr. Bryan: That is, the price of Hebe had been 12 cents?

Mr. Balderston: Yes.

Mr. Jackman: How long back was that?

Mr. Balderston? I don't know.

Senator Kendrick: Is it your suggestion that the quality of the goods might have been possibly cheapened?

Mr. McKee: No, sir. There has been a decline in price.

Senator Kendrick: I thought perhaps the thought was there was such a demand——

Mr. Balderston: No grocery stated to me, sir, that there had been a great demand. One grocer said to me that he understood it was outlawed. I asked one grocer if he kept it and he said no. I asked him why, and he said it had been outlawed, or he understood it had been outlawed in Washington. He knew it was outlawed in Maryland. At any rate, they were not keeping it. He was simply an employee.

Mr. Bryan: That was at the Sanitary on Pennsylvania Avenue, near the Dutch Market.

Mr. Balderston: At the A. & P. store at Ninth and M Streets we bought A. & P. evaporated milk for 9 cents. That is evaporated whole milk.

Mr. McKee: That is the Atlantic & Pacific chain store?

Mr. Balderston: Yes.

That was prepared for them, so it states here, by the Dairymen's League Cooperative Association, of Utica, N. Y., of which Mr. Miller, who spoke to you this morning, is vice president.

Mr. Bryan: The A. & P. is a chain of stores?

Mr. Balderston: Yes. We visited other A. & P. stores and found the same, and visited other Sanitary stores and found the price ranges about the same.

I went to the Piggly Wiggly store at 1530 Seventh Street and bought a can of Sunset Gold evaporated milk for 9 cents.

This morning I bought Dairymen's League at 9 cents at an Italian store right across from Center Market. I did not buy in several other stores. When I went in I asked the prices simply. But there was only one store which I visited where the price was above 10 cents, in a little restaurant and delicatessen store which has three cans of Borden's condensed milk, large cans, and I asked the price and he said 11 cents. Evidently they do not make many sales, because he only had three cans there. But that was the only place where I found it for 11 cents.

Mr. Bryan: Did you buy any Borden's evaporated milk for 10 cents in any other store?

Mr. Balderston: If I did, I have it here. I did not buy. It was offered to me for 10 cents. Yes; at the store on Seventh Street, the Sanitary Grocery Co., I bought a can of Borden's evaporated milk for 10 cents. I overlooked that.

Mr. Bryan: All these evaporated milks contain all the milk, do they not?

Mr. Balderston: Yes. They are the genuine full can of evaporated.

Mr. Bryan: And they are the same size as the 10-cent can of Hebe?

Mr. Balderston: Yes, sir.

We also a few days ago bought Eagle brand, which has been here so much in dispute, sweetened condensed, for 20 cents at a Sanitary store just below the Powhatan Hotel, [fol. 591] and Challenge brand for 13 cents. Those are both sweetened milk. I submit those prices because one of the witnesses for the opposition to the bill stated they had to pay 25 cents to get them.

Mrs. Gray testified that she had bought two cans of Hebe here for 7 cents and had to pay 12 cents——

Mr. Bryan: Two cans for 7 cents?

Mr. Balderston: For 15 cents, or 7½ cents apiece, and had had to pay 12 cents for the Carnation. As I say, I have not found Carnation anywhere as high as 12 cents, although I went to the better stores and went to the others, and we went in the poor quarters and I was not able to buy the compound at two cans for fifteen cents. I would like to ask if that was a special sale. Mrs. Gray gave me the name of the store.

Senator Kendrick: Don't you think it is possible that Mrs. Gray, as she expressed it to the committee, as one of the mothers, understands buying?

Mr. Balderston: Very likely. I don't know. I simply want to submit in evidence this array of the range of prices at the present time in Washington, showing that to the best of our knowledge the consumer gets no advantage of the $1.48 per case, or over three and a half cents per can less cost to the wholesaler.

Senator Kendrick: In connection with the statement about Mrs. Gray, may I ask did you ask in any of these places where you bought these cans if you could buy more than one can for a certain amount?

Mr. Balderston: I did not. I saw no such offer as special at all.

Senator Kendrick: They are sometimes sold that way.

Mr. Balderston: I know they are, but I asked about the way they were selling them, so that I think if they had special sales they would have let me know. But I can not testify——

Mr. Bryan: When they have special sales they are apt to call attention to them?

Mr. Balderston: Yes.

I might call attention to the fact that at two cans for 15 cents, that is $3.60 a case. At the price at which it is sold wholesale that leaves but 60 cents per case profit for the wholesaler and the retailer, according to the figures given this morning by Mr. Cowan.

Senator Kendrick: It is not likely that the retailer would insist on a profit nearer 60 cents a can?

Mr. Balderston: It looks as if the others are getting nearer the 60 cents a can, because they are charging the same price, and I might remark here that it looked to me as if the Old Dutch Market wished to make nearer the 60 cents per can profit, because they are selling Hebe for the same price as they are selling the Carnation, and I make the assertion the profit does not go to the people, but does go to the Old Dutch Market.

I want to ask Mr. McKee if he has with him a copy of his sales plans for 1921?

Mr. McKee: Yes; you mean the advertising?

Mr. Balderston: Yes.

Mr. McKee: Yes.

Mr. Balderston: Are they in the record?

Mr. McKee: Yes.

Mr. Balderston: On the top of page 2, Mr. Chairman, of this prospectus or sales plan for 1921 of the Hebe Co., the first sentence is "There is a profit for everybody in Hebe; that is, for everybody who wants to take advantage of the big new market Hebe is creating," etc.

It is on the basis of the profit that the dealers make that we make our assertion that it is to the dealers' interest always to push the compound.

Just one other question in regard to this increased profit. Now, Mr. Cowan this morning was asked by myself whether they had a representative in New York for export. He said no. I am glad he did, because it exonerated them from any complicity in the case of the World's Oceanic Corporation which I introduced in direct evidence at one of the former hearings where this corporation endeavored to sell Carolene to the American Friends' Service Committee of Philadelphia for child feeding in Europe. I have read that into the record, Mr. Chairman, so that I will not burden you with it again unless you wish me to read it again—the letter which I received from the American Friends' Service Committee.

I have just one more photograph to refer to. Miss Laura H. Cauble, in direct testimony introduced a photograph of range of prices of compounds in New York which I will not burden the record with again, but I will pass it along for the committee to look over.

Mr. Bryan: What is the price range, briefly?

Mr. Balderston: From Hebe, three cans for 25 cents, to Carolene and Nyco at the same price, all being large cans, to Hebe 15, 16, and 18 cents.

Mr. Urion: That is at different stores, I take it?

Mr. Balderston: They were at different stores. The cases I found in Washington were in the same store. Don't forget that.

Mr. Jackman: When were those purchased?

Mr. Balderston: It is in the record. I simply wanted to pass them for Senator Kendrick's information. February 21, 1922, was when those were bought.

Mr. E. N. Quackenbush introduced into the record at the former hearing a photograph of a window display in Pittsburgh, in which Carnation milk and Carolene were advertised at 10 cents, as also the Wilson brand of evaporated milk.

Mr. Jackson: At how much?

Mr. Balderston: At 10 cents. I wish now to refer, Mr. Chairman, to the matter of this letter which was submitted in evidence, having been signed by Mr. Walter Engels, of the Borden Condensed Milk Co., and addressed to me. I am very glad to acknowledge that I received the letter, and I am also glad to know just how it came into the hands of the opponents of the bill. I wish to explain that my first information in regard to these compounds came to me on my arrival home from Europe where I was in child feeding, when the people in the office told me that the representative of the Hebe Co. had been in the office endeavoring to get our association to approve their products and indorse them. Our people had taken no action. They thought they had not enough information. I heard nothing more until we had a meeting of the State dairy council at Harrisburg, called for an entirely different purpose, namely, to confer with the State department of health over another measure, when, after that business was over, Mr. Bell, of the Reick-McJunkin Milk Co., of Pittsburgh, the largest firm of retail milk dealers in that city, said: "Gentlemen, we have another matter here that I would like to take up with you. There is a company out in our town trying to sell stock in an enterprise in which they want to make ice cream without any butter fat in it, and call it ice kream."

I am sorry I do not have with me the prospectus. I think it is the Momus Co. He said, "I have been looking into this matter and I think we need to have some legislation in this State against it." He said, "I wrote to Doctor Erf, of Ohio, to know what legislation they had against compounds of coconut oil and skim milk, and I have here some letters from him." As secretary of the State dairy council he turned the letters over to me and I was directed by the council to make inquiry of other States as to what they had done, to find out what legislation was in effect, and with the advice of the counsel of our Interstate Milk Producers' Association, of which I am also secretary, we prepared a bill. Mr. Buse, of Buse & Caldwell, Pittsburgh, told Mr. Bell, and he told me to get in touch with Mr. Walter Engels, of the Borden Condensed Milk Co., as he had been familiar with legislation on this subject. Therefore, while our own counsel, Taylor, Taylor & Robey, of Philadelphia, was preparing the proposed bill, I went over to New York and conferred with Mr.

Engels. That was the first time I had met him and the first time I had ever known the Borden Condensed Milk Co. was interested in this case.

I want to say right now in parenthesis, Mr. Chairman, because it has not been put into the record yet, the John Wilde Milk Co., which helped the state's attorney in the Ohio case, now being a member of the Nestles' Food Co., is making a filled milk. A representative of that company told us in our office that they did so from the force of competition. He said they would be glad to get out of the business as soon as their competitors had to get out of it; that they did not want to remain in it. They were in it, as I see it, Mr. Chairman, on exactly the same basis as the Borden Condensed Milk Co.

But I hold no brief for the Borden Condensed Milk Co. We accepted Mr. Engels assistance as we accepted the assistance of anyone else who comes to our aid.

The P. E. Sharpless Co., manufacturers of condensed milk, and the Pennsylvania Milk Products Co., both were behind the bill at Harrisburg which was drawn up. I might say in passing that the bill which is referred to in that letter, or the suggested bill which is referred to in that letter as inclosed, was not the one used in Pennsylvania, because we felt that our attorney had one along better lines, and the bill which went to Wisconsin and has been upheld by the Wisconsin Supreme Court is the bill drawn up by Messrs. Taylor, Taylor & Robey in most of its substantial provisions.

I wish to explain, for Mr. Jackman's information, that I received, during the progress of our investigations in Pennsylvania, a copy of similar legislation which it was proposed to introduce in Wisconsin, asking our opinion with regard to it. I countered by sending back a copy of our proposed bill, and I received a letter from the interests who were behind the bill in Wisconsin saying that they thought our bill was the better one, and I could explain, if you wish me to take the time, the similarity and the difference between the two bills.

[fol. 592] So much for the charge of conspiracy. That is all there is with regard to that letter. I submit, Mr. Chairman, whether I do not have the right, as secretary of a large farmers' organization and secretary of a State dairy council, to call to my assistance and to the assistance of the council and the farmers' organization any interest which, for the time, is interested in the same bill in which I am in,

terested, and which can help us to formulate a bill which will prove to the best advantage of those interested and to the best advantage of the public, and to allow them, if you please, to sit alongside of us in the hearings at both Harrisburg and here.

Mr. Holman will introduce testimony a little later as to just how the Voigt bill was started, because I was not here at that time.

I do want to say, however, that it is my recollection—I think I can substantiate it by correspondence, but I did not know this was coming up, but Mr. Engels came here to the first hearing at my invitation. I did not know anything about the Voigt bill having been introduced until I received information from Mr. Holman. I know that Mr. Holman at the time did not know there was such a person as Mr. Engels, and I took the liberty of inviting Mr. Engels here, knowing that he had information in regard to these various acts.

As to the part which Mr. Bryan has taken in these hearings, he will have to speak for himself. I only have to say this, that I never saw him until he appeared here at the hearing. I never met him until he came to the door and he had to ask who we were. He asked me if I was Mr. Holman.

So much for any conspiracy between Mr. Bryan and myself. As for any conspiracy between Mr. Holman and Mr. Bryan, they can speak for themselves.

Mr. Holman: We will.

Mr. Bryan: Is there any conspiracy you want to comment on at this time?

Mr. Balderston: I hesitate, Mr. Chairman, to introduce, but it seems necessary in view of the accusations that have been made, an affidavit which is already in the record to the best of my knowledge. I at least gave it to the stenographer. This is a copy of the affidavit. Is the original in the record?

Mr. Miller: Yes.

Mr. Balderston: I want to just read this to show that we are not the only people. I have one copy here which I will read. This is in reference to two women in Philadelphia who Miss Edith M. Howes found in the course of her regular duty were feeding milk to their children, evaporated milk or compound as the case happened to be, not knowing any difference. She found them buying—and this is all in the record—Hebe, not knowing that it was not milk, and feeding it to all the children, including infants.

In introducing our testimony at New Jersey we simply referred to them as the B and E cases. Shortly after arriving home Mr. Miller received a letter from Mr. William E. Evans, in which he says:

"In connection with hearings on Senate bill No. 4 before the Committee on the Judiciary, which said committee I have the honor to be chairman of, I will thank you if you will forward by return mail a list of the names and addresses of the persons who have used the Hebe product as food for infants. You may recollect that it was stated that you had these names and addresses in your Philadelphia office, and you would be glad to furnish them to the committee.

"Your attention to this matter will oblige me.

"Very sincerely yours, William E. Evans."

That was addressed to Mr. A. A. Miller, Heed Building.

Mr. Miller happened to know that the only person who had asked for information in regard to these addresses had been a representative of the Hebe Co. to whom he had stated that they were in the office. We therefore take it for granted, as I think anyone would, that the Hebe Co. wanted to get these addresses, so we had Miss Howes keep in touch with the women along that line as well as the other line, in which she was regularly employed to visit. Understand, Miss Howes had been visiting these families for months in connection with her work as a nutrition worker, because there was an undernourished child in each family. She found on her next visit that certain things had happened, and the father of the Englehardt girl made this affidavit:

"A representative of the Hebe Condensed Milk Co. called on me on Tuesday, February 21. He asked if I used the milk and was satisfied with it. I replied my wife did use it and for all the children including the baby. Then, making a mistake and thinking the Hebe brand was the Health Brand we now use, I said it was a good milk and agreed to letting my name be used in an advertisement to be published in a magazine about milk. The man representing the Hebe Co. said the company would give me $20 or $25 (or a case of milk) if I did so. He left, saying he would return in a day or so with the statement, or whatever it was, to be written out in the magazine, so that I might see it before it was published.

"While I was talking with the man my wife interrupted once, trying to let me know that it was another brand of evaporated milk and not Hebe brand I was thinking of, but I did not understand her. I expected the man to return with the advertisement he promised to show me, but he did not do so. It was not my intention to indorse the Hebe milk.

"Gustav Englehardt.

"Witnessed: Edith M. Howes.

"Sworn and subscribed to before me a notary public for county of Philadelphia, State of Pennsylvania, this 13th day of June, A. D. 1922. "Joseph Collins Allen, Notary Public."

It was not my intention to introduce this originally to show conspiracy, but since we are charged with this, I simply want to call attention to the fact of what an agent, or what at least he said was an agent, of the Hebe Co. had done.

Mr. McKee: May we ask that that be introduced in the record? We haven't any knowledge of Mr. Evans, or anything about it at all. We would like to have it in the record so we will have access to it.

Senator Kendrick: I see no objection to it.

Mr. McKee: Mr. Evans was chairman of the committee?

Mr. Balderston: Chairman of the committee on judiciary.

Mr. McKee: We would like to have the record show that Mr. Evans was chairman of the judiciary committee of the Legislature of New Jersey, to which this bill was referred.

Mr. Balderston: I stated that in the record; that he was chairman of the committee.

Mr. Bryan: He said that in his letter.

Mr. Balderston: "Of which said committee I have the honor to be chairman."

Mr. McKee: To which this bill was referred?

Mr. Balderston: Yes.

I have only one other matter to take up, Mr. Chairman. I have two small matters. I want to refer again to the fact that this is not a trial of the Hebe Co. You gentlemen told us several times you were farmers, and you did not want a court trial. The evidence of the proponents which the opponents did not hear contains several pieces of evidence with regard to other companies besides the Hebe Co. We do not hold the Hebe Co. responsible for their acts. I just simply want to call your attention again, Mr. Chairman, to the similarity of color, shape, form, size, and everything of the

two cans, one the Dairymen's League Evaporated Milk and the other the Nutro compound, manufactured by the Indiana Condensed Milk Co.

Mr. McKee: Which one of these two products was put on the market first?

Mr. Balderston: I don't know.

Mr. Jackman: Let the record show, which is the fact, that the Nutro was on the market before that Dairymen's League brand of milk was put on, and the only color can that the Nutro was ever put out in is the can there, the yellow and black can. That is made by the Indiana Condensed Milk Co., of Indianapolis.

Mr. Balderston: I want to call your attention to the fact that the Majal can of evaporated compound has this statement: "In place of cream or milk in your coffee produces wonderfully gratifying results. For cooking or baking use as you would milk or cream."

I protest, Mr. Chairman, against saying that this is a product which is essentially different and distinct, in the words of the opposition, "from evaporated milk or cream." "For cooking or baking, use as you would milk or cream."

Also this can of Majal compound contains no warning whatsoever with regard to not being used for infants.

The opponents of the bill refer to the very small print on some of the cans of skimmed condensed milk. I wish to call attention, Mr. Chairman, to the very small print on a small can of Silver Key milk compound, in which they have put the warning "Don't use for infants." I would like you to look at that.

Mr. Bryan: Right there, Mr. Balderston, does the Nutro can contain any warning whatsoever as to warning not to use for infants?

Mr. Balderston: I see none on the can of Nutro.

Mr. Bryan: Have you examined it carefully?

Mr. Balderston: I have examined it all over.

Mr. Jackman: How old is that can?

Mr. Balderston: That was bought about the first of the year?

Mr. Bryan: The first of the present year?

Mr. Balderston: Yes.

I introduced in direct testimony the fact that the demonstrators of the Valetia Milk Co. had endeavored—these were not ignorant store people, but the paid agents of the Valetia [fol. 593] Milk Co.—to sell me Silver Key Compound as

milk. I wish again to call attention to the great similarity in the label of the Silver Key, a compound made by the Valetia Milk Co. and sold under the name of the Interstate Milk Products Co. and the genuine evaporated milk, Golden Key Brand, made by the same company at the same factory. We simply want you to bear those in mind.

I have a can of Enzo in my hand, which is a compound made by the Enzo Co., Sheboygan, Wis. "Great in food value," it says.

Mr. Hohman: Do you know who owns that company?

Mr. Jackman: The Denmark Milk Products Co., is my understanding.

Mr. Balderston: On this can it says "Great in food value. For cereals, baking, and cooking. Also for tea, coffee, and cereal beverages." For coffee and cereals.

Mr. Bryan: Is there any warning on there?

Mr. Balderston: On the Enzo can there is no warning whatsoever as to not being good for infant feeding.

So that the Hebe Co. suffers by being in bad company. They are not responsible, of course, for the sins of the other manufacturers, but in passing legislation of this kind we must pass legislation for the industry, regardless of where the ax falls. But the Hebe Co. itself, as careful as it has been, is not able to get away from the fact that this product is used for the same things which milk is used for. I have in my hand the Hebe receipt book in which they state—and this receipt book, by the way, was received the 6th of July, 1922, at the National Milk Producers' Federation, 1731 I Street, Washington, D. C., in which they still recommend Hebe for cocoa making and for tea and coffee.

I wish to ask if it was not a fact that there was introduced in Wisconsin, in the hearing there, a digest of receipts for waffles made by one of the State witnesses, in which it was shown that of 45 receipt books other than the Hebe cook book the receipt for waffles called every time for milk or cream, and none of them called for any liquid other than milk.

Mr. Jackman: It is only fair to say in that connection—I am taking it that you are reading the transcript there—that the testimony also showed that the man who made that tabulation did not try to put down any receipts except those that called for milk, out of a large number of cook books he examined. He left out all the rest of them.

Mr. Bryan: In that connection I wish to call the committee's attention to the fact that the referee in the Wisconsin case, whose findings have been introduced and relied upon by the Hebe Co. has this to say on the subject. He finds that the Hebe Co. in some of its advertisements, including the receipt book containing about 55 receipts; prescribes the use of Hebe in the receipts wherein standard cook books in the receipts quite commonly prescribe the use of milk.

That is on page 42 of the printed record in the case of Wisconsin.

Mr. Jaykman: The same cook books prescribe Crisco and other things where in the standard book lard is prescribed.

Mr. Bryan: These are the findings of the referee. It did not deal with Crisco.

Mr. Balderston: I wish to refer to the testimony of Doctor Ramsey and others with reference to purchases of Hebe and other compounds in the city of Perth Amboy, and also to a page of photographic copies of advertisements of marketing methods of storekeepers in regard to these compounds in various parts of the country, which was submitted in our direct testimony.

The Rockville Farm Bureau butter, eggs and cheese market, 203 Smith Street, Perth Amboy, advertised in the Perth Amboy Evening News on Friday, March 18, 1921, "Evaporated milk, Saturday only three cans for 25 cents." Mr. Miller here and another representative called there, and the three cans they received were Nyko compound and not evaporated milk at all.

So that while Mr. Ramsey may never have been able to buy the compound sold as milk, with just one day's visit over there Mr. Miller and his assistant were able to buy it in that store and in a great many others, which were introduced into the original record. They were able to buy it in some stores as a compound, but in many stores they were able to buy simply when they went in and asked for cheap evaporated milk, or evaporated milk, compounds which were recommended to them, as I told you before, to be as good as any brand of evaporated milk.

In closing, I want to refer to the interesting testimony of the economist from Columbus, Doctor Aggar. Either this product has reached its maximum development, as far as marketing possibilities are concerned, or it has not. Mr. McKee referred a few minutes ago to the very trifling amount of milk which went into it, as he said, and the

trifling amount of injury which it was doing, if any, I suppose he would add, to the dairy industry. Doctor Aggar said that there is a possibility of developing this trifle to 1,500 times its present size.

Mr. Jackman: Oh, no.

Mr. Balderston: One thousand five hundred per cent, was it?

Mr. Jackman: No. You have the thing twisted, if you will pardon me.

Mr. Balderston: What did he say?

Mr. Jackman: He said from the time it was first introduced it has been increased.

Mr. Balderston: I was not referring to what he said about what has happened. He was referring to the possibilities of purchasing skim milk and coconut oil in this country.

He said the possibilities of getting those two products and putting them together and putting it on the market made it possible to increase the product 15,000 times. I repeat that is what he said, or that is what we understood he said. If that be so, Mr. Chairman, then the matter is not so small and trifling as Mr. McKee would have you believe, and the dairy interests have a right to take the long time of this committee with this prolonged hearing, and to ask the Senate to pass a bill already passed by the House prohibiting the interstate traffic in these products.

I thank you very much for your time and courtesy.

Mr. McKee: Your statement that skim milk compounds were offered to feed the starving children of Europe was based upon a letter addressed to you by James A. Norden, of the American Friends Service Committee, which you circulated in this bulletin?

Mr. Balderston: Yes.

Mr. McKee: I would like to read that letter in the record.

Mr. Balderston: It is already in the record.

Mr. McKee: I would like to emphasize this part of it just to show that there was no intention of deception in the offer. This letter is addressed to Robert W. Balderston, Philadelphia Interstate Dairy Council, Heed Building, Philadelphia, Pa.

"Dear Friend: In reply to your inquiry, I can advise you that the World's Oceanic Corporation of 170 Broadway, New York City, have made several efforts to sell to the

American Friends Service Committee of Philadelphia, Pa., for child feeding in Europe, large quantities of Carolene milk to be used as a substitute for our regular evaporated milk. They stated that it was a skimmed milk, but that the butter fats were replaced by vegetable oils, making it a satisfactory product at prices somewhat cheaper than other brands."

I read this in the record for the purpose of showing that the World's Oceanic Corporation stated plainly and clearly that it was not milk, but was a compound in which butter fat had been substituted by something else.

Mr. Balderston: I may make this one comment. I may say that the only purpose for which the Friends Service Committee buys milk or bought milk at that time was for this child feeding in Russia and other countries of Europe where they were doing that feeding for the relief of starving children. It was known to the trades that that was the purpose for which they were buying the milk, and I may state that the way I came to get in touch with this matter was that I was formerly abroad in that service, and that Mr. Norden called me up to know whether the Carolene milk, as he called it, was as good as the brands which they had been buying and whether I would recommend it. I told him of course I would not, and I asked him to please state to me just what had happened, for the purpose of record.

Mr. Bryan: That letter calls the compound Carolene milk.

Mr. Balderston: "Carolene milk" is the way it is spoken of.

Mr. McKee: I also had a talk with the manager of this corporation in New York, and he told me that in response to an inquiry made by the American Friends Service Committee he sent them a chemical analysis of Carolene, which showed that it was skimmed milk and vegetable fats; that there was no attempt to deceive, and the American Friends Service Committee were buying not only large quantities of evaporated milk, but large quantities of other materials not only used for feeding infants in Europe, but for feeding the starving population of central Europe.

Senator Kendrick: The committee will stand adjourned until 10:30 to-morrow morning.

(Whereupon, at 4.30 o'clock p. m., the committee adjourned until to-morrow, Saturday, August 5, 1922, at 10.30 o'clock a. m.)

[fol. 594] FILLED MILK

Saturday, August 5, 1922

United States Senate,
Subcommittee of the Committee on Agriculture
and Forestry,
Washington, D. C.

The subcommittee met, pursuant to adjournment, at 10:30 o'clock a. m., in room 224 Senate Office Building, Senator William B. McKinley presiding.

Present: Senators McKinley (chairman), Ladd, and Kendrick.

Senator McKinley: The committee will come to order. Mr. Holman, I believe we are at your service.

Further Statement of Mr. Charles W. Holman, Executive Secretary, National Milk Producers' Association, Washington, D. C.

Mr. Holman: Mr. Chairman, at the time you left yesterday you were asking some questions with regard to our position on the condensed skim milk. It is true that the National Milk Producers' Association has not as yet discussed its policy with regard to legislation on condensed skim milk, but several of our member associations have already had to face this problem in their respective States, and in each case they have taken the position that they are favorable to prohibitory legislation in so far as condensed skim milk is concerned in small packages like the 1-pound can, which therefore may be likely to be used for counterfeit and fraud. We have no brief for condensed skim milk. We did not draw the Voigt bill, but we are supporting the Voigt bill, and it did not at any time nor does it to-day occur to us that the purposes of the Voight bill apply specifically to the question of condensed skim or condensed sweetened milk. That we feel is an attempt to so broaden the purposes of the bill that if such were done it would perhaps involve many conferences and further delay the passage.

This particular bill deals primarily with the competition of butter fat with vegetable oil fat in relation to a product which is made in the semblance of milk and, as dairymen, in addition to the public-health argument which has been ably

presented by the scientists here, we make the point that the economics of the industry would be adversely affected by the continuation of this traffic and its growth, and that the putting out of this product on the market in the semblance of milk lends itself to many fraudulent practices which should be discontinued and should be prohibited.

Senator McKinley: Do I understand, then, that you would equally object if they were using peanut oil or cottonseed oil?

Mr. Holman: Equally so. I deal with that in just a minute, Senator.

Mr. Urion: And corn oil, if I may be pardoned.

Mr. Holman: Yes; whenever made in the semblance of milk and under such conditions that its sale lends itself so that it can be palmed off as milk. We do not go so far as this position in regard to powdered skim. It is of a different nature, and we do not wish to go on record at the present time as saying that we would favor its prohibition, although we have not as yet established our own policy. But we do not wish to say that we would be in favor of prohibiting powdered skim milk. We do wish at this time to criticise very severely the labeling of Klim, which was demonstrated yesterday, and we think that should be changed very materially.

In regard to condensed skim milk, we are not prepared, any more than Doctor McCollum was prepared, to say at this time that condensed whole milk, sweetened milk, should be prohibited.

Senator McKinley: Did you say what you wanted to? You said in regard to condensed skim milk.

Mr. Holman: I intended to say in regard to condensed whole sweetened milk.

It has been pointed out that there are many parts of the country, and there are parts of the Orient where this product is used perhaps not as well as whole cow's milk, but for reasons, namely, that there are no cows.

[fol. 595] Senator Kendrick: May I ask a question there? Is the sugar necessary in the preservation of the milk, in making it more easily kept?

Mr. Holman: I am informed that the addition of the sugar has been not for the purpose of enriching the product but to preserve the product, and while I grant that after the can is opened there is some danger in continued use

yet if we take a condition such as we had in the Orient, where American families and others do not dare use the product of the cow or the product of any greens unless they have been subjected to high boiling because of the practice in the Orient of using human manure, and the resulting diseases which come from infection, it is a very serious problem over there as to the securing of an adequate milk supply for the infants, and there are no doubt other parts of the world where condensed sweetened whole milk has been successfully used with these limitations, which we grant.

We accept the statement of the economist who appeared for the filled milk interests when he said that this problem comes right down to a question of competition in oils. We would rather phrase it that it comes down to a competition in fats. Primarily at this time it is a competition between the dairy fat or the butter fat and the imported oriental fat. It is a competition between a constructive food and a food which is negative in so far as the vitamine A is concerned, and I will introduce, before I am through, supplemental evidence from a very great authority showing the results of the latest experiment station records as to the content of the fat soluble in the skim milk after the commercial process is over, but just at this time I want to go a little further into this question of fats, and if you will pardon me for digressing, the fat soluble can not be considered on the filled milk basis alone; it is inextricably tied up with the tariff. The gentleman who appeared saying, I believe, that he represented the Interstate Cotton Seed Crushers' Association, which name should be changed, since it is officially known as the Interstate Crushers' Association, having been modified, taking it out of the original jurisdiction of representing cotton seed crushing mills alone, to include brokers, importers, refiners, and foreign exporters who export to this country.

This gentleman came here very solicitous in regard to finding a market for cottonseed oil. He was very anxious that this bill should not be passed, because he feared that at some future date chemical experiments might find a means whereby cottonseed oil might be successfully used.

I am going to point out to that gentleman a means right at hand whereby 125,000,000 pounds of cottonseed oil can be used in this country this next year. He is familiar, as I am familiar, with the fact that the soap industry alone uses annually 126,390,000 pounds of cottonseed oil and the soap

industry also uses 124,058,000 pounds of soy bean oil. At the present time there is an emergency rate of approximately 2.6 cents on the soy bean oil coming into this country.

Senator McKinley: Tariff rate?

Mr. Holman: Yes, sir. The wholesale prices of oil are now based upon that rate. The retail prices of soap are now based upon that rate, and yet this gentleman and his association, due, I charge to the influence largely of the refiners and in part by Mistui & Co., the Rockefellers of Japan, went on record at the meeting in January of this year reserving themselves from having asked for a duty on soy-bean oil to asking that it come in free. Now, what is the purpose of that? With the prices already fixed, if this proviso which was passed by the Committee of the Whole of the Senate recently stays in, it means that soy-bean oil will come in free of duty for soap-making purposes, and to that further extent will take away the market which cottonseed oil now has in regard to soap making, and I challenge the gentleman or anyone else to disprove this assertion. If he is so anxious to find a market for cottonseed oil—and I speak now as a southern boy who has been in the cotton business and has been in the cottonseed oil business, and I believe I know something of the views of the southern farmers in this respect—we would rather have a great big market for cottonseed oil in the natural legitimate avenues that cottonseed oil should go rather than as cotton farmers to be competing with our brother dairy farmers in regard to a food product.

So I point out that there is right now plenty of opportunity in the soap business for cottonseed oil. There is plenty of opportunity in the land substitutes, and owing to the fact that we had traced down—and this is a matter of record in the Senate Finance Committee—the direct connection of the Japanese exporters to that changed policy at New Orleans, we are naturally wondering whether the Japanese may not have some reasons for continuing this fight of the Cotton Seed Crushers Association with respect to the filled milk bill.

The chemist, Mr. Grindrod, I believe, made the statement that the filled milk constituted a medium for marketing the fat. Is that correct?

Mr. Jackman: I didn't understand just what you said.

Mr. Holman: Mr. Grindrod made the statement that the filled milk constituted a medium for marketing the fat rather than the skim.

Mr. Jackman: That was Mr. Aggar.

Mr. Holman: That was Mr. Aggar; yes. We accept that statement and let it stand on its merits. We also point out that not until the present spring have we heard of any oils other than coconut oil being used in the making of filled milk, and we doubt, and doubt very much at the present time that the chemical research has yet shown that these products, such as peanut oil and cottonseed oil can be used commercially. Doctor Ladd knows the difficulty in handling some of these oils, because of the odor which returns to the oil, although that can be taken out; yet we are informed that it is a very expensive process. There is another thing which I would mention, and that is the question of the teeter of the oils which makes coconut oil so much more usable for this purpose than the other oils which have been discovered to date, yet we grant that in many food uses and other uses these oils are practically interchangeable.

I believe Mr. Grindrod testified on page 84 of the brief prepared by Mr. Jackman and his associates——

Mr. Jackman: That is not a brief, Mr. Holman.

Mr. Holman: The statement of the record.

Mr. Jackman: It is just a transcript of the record.

Mr. Holman: On page 211 of the record, as follows: "Coconut fat is utilized because it is the only vegetable fat which has ever been purified to such an extent it can be used successfully," and he refers further to the taste of cotton seed oil.

Just at this point, Senator, I would like to call your attention to the type of manhood in the Orient which these gentlemen are asking us to compete with as dairy farmers. These are typical coolies, taken in Manchuria, working primarily on soy beans, but the type is the same, so far as coconut oil is concerned. It is difficult to describe these coolies for the record. Here is the type of junk that often brings in the copra, and here are millions of tons of soy beans waiting to come into this country to prevent the Interstate Crushers' Association from finding a market for cottonseed oil in soap.

The opponents quoted from a letter written by Doctor Alsberg in 1921. The committee is aware, of course, that the views of the Department of Agriculture were expressed to the House Committee on Agriculture in the hearings on the Vestal bill, which extended from June 13 through the 20th of

July. These views were expressed by Dr. C. W. Larsen, Chief of the Dairy Division, who came to the committee with a letter from Secretary H. C. Wallace, which I will not read into the record, but refer to that letter on page 114 of the House hearings. Since that time it is only fair to say that a committee representing the farm organizations, with headquarters in this city visited Mr. Wallace and discussed this matter with him, and he said that he would be very glad to have Doctor Larsen appear again and resubstantiate the position of the department in respect to filled milk.

Now, what does Dr. Larsen say? Many times he reiterates on examination and cross-examination——

Mr. Jackman: What page is that on?

Mr. Holman: Beginning with page 112.

Senator McKinley: You are not going to put this in the record?

Mr. Holman: Only about two or three sentences. I just want to get the point in here.

He reiterates that the making of this product does not furnish an extra market for skim milk. The first time that appears is on page 112, again on page 117, and throughout the testimony; and on page 113 he makes the statement that at that time 156 stores in the city of Washington were selling filled milk and evaporated milk for the same price, namely, 10 cents a can. The views of Doctor Larsen are so admirably expressed in this hearing that I recommend the gentlemen of the opposition to read them again. Reference is also made at the time of the hearing, and if it is available I would like to call for the Steenbock letter, which was used yesterday, a letter dated some time in 1920, which was received, I believe, by Mr. Jackman.

Mr. Jackman: No, it was not received by me. It went to the Indiana Condensed Milk Co.

Mr. Holman: I want to be correct on this, and I believe that the emphasis to be drawn from that letter was that the vitamine content of skimmed milk was about 50 per cent of the original whole milk.

Mr. Jackman: The statement, if you will pardon me if I correct you—well, get the letter. It is there.

Mr. Holman: Yes. We had better have the letter.

[fol. 596] On August 13, 1920, in the letter to Mr. John L. Clough, Professor Steenbock at that time writes in ref-

erence to filled milk, I presume, "It contains practically all of the carbohydrates, proteins, and minerals that were originally in the milk. It also contains the water-soluble vitamines, but no one is in position to say how much of the original fat-soluble vitamine content of the milk it contains."

At this time I desire, because of its great importance, to read a short statement from Prof. E. B. Hart, of the department of agricultural chemistry, College of Agriculture, University of Wisconsin, and associate of Professor Steenbock, and in full accord and harmony with Professor Steenbock's views. This statement was prepared for introduction into the record. It is entitled "Filled milk a health menace. Coconut oil or any other plant oil not a substitute for milk fat."

"In Bulletin 342, April, 1922, Wisconsin Experiment Station, we wrote, 'The use of "filled" milk for infant feeding is intolerable and should be prohibited by law, since many mothers of limited means do not know the dangers of filled milk, they are bound to use it when available. In the interest of public welfare it is desirable to entirely prevent its sale and manufacture. Certainly the claim of the manufacturer to a legal right to manufacture his product even if correctly labeled—ought not to be allowed to produce a situation liable to deprive infants of their right to normal growth and health.'"

"To-day there is considerable traffic in the manufacture and sale of 'filled' milk, that is a milk from which the butter fat has been extracted by centrifugal processes and in which a cheaper fat, mainly coconut oil, has been substituted. One of the prominent brands of filled milk on the market is Hebe. The buying public is just as likely to buy a can of this condensed filled milk as it is a can of condensed whole milk, unconsciously expecting that it is buying materials of equal nutritive value. (See report of Deputy Attorney General R. M. Hoyt to Wisconsin Supreme Court, January term, 1922.) On this latter point—equal nutritive value—science has gone far enough to give us indisputable facts, and these facts I want to present in this short discussion.

"The main difference between the two products, evaporated filled milk and evaporated whole milk, is the content of fat-soluble vitamine. This vitamine is recognized as just as essential for growth and maintenance of an individual

as is protein or a balance of mineral salts. In its absence in the dietary the animals' growth is suspended with the manifestation of a diseased condition of the eyes. The ultimate effect is blindness with sudden death, often complicated with respiratory troubles. A few years ago before we knew much about the distribution of this vitamine and before our methods of experimentation were as well perfected as they are to-day, the statement went forward from this laboratory that separator skim milk contained about one-half or 50 per cent of the fat-soluble vitamine originally contained in the whole milk; in other words, that about 50 per cent had been removed with the removal of the fat. Today we know that this figure is too high for the content of this vitamine in skim milk. With refinement in our experimental procedure Professor Steenbock has shown that the fat-soluble vitamine content of skim milk is about one-tenth of that which was originally present in the whole milk. In other words, probably about 90 per cent of the fat-soluble vitamine in whole milk has been removed in the skimming processes. This fat makes skimmed milk a poor source of the fat-soluble vitamine. When rats are fed a ration which is practically free from fat-soluble vitamine, 100 c. c. of skim milk will not induce normal growth; while one-half to one centigram of whole milk will induce a normal rate of growth.

"Identical in character or associated with the fat-soluble vitamine is a vitamine in whose absence faulty bone formation or rickets develops. This vitamine is also contained in butter fat."

Reference is made to Bulletin 342, Wisconsin Experiment Station. This bulletin gives the pictures of the dog. The dog above, you will note, is a healthy dog and the dog below was not able to stand up on account of the rickets.

"The basis, then, for objection to a traffic in filled milk rests upon the scientific fact that skim milk, which is the basis of this product, has been robbed very largely of some of its great essentials for normal nutrition.

"The next outstanding fact derogatory to a filled milk as being of equal value to a whole milk is this: The coconut fat or oil which is added is in itself practically free of the fat-soluble vitamine. (See Journal of Biological Chemistry, vol. 35, 1918, p. 524.) It, like practically all other vegetable oils, is so free from this nutritive factor that it is

difficult to establish whether it contains any fat-soluble vitamine.

"These two facts—low content of fat-soluble vitamine is the skim milk and the addition of an oil practically free from this nutritive factor—must make it clear that filled milk is no substitute for whole milk in the nutrition of infants of children or in cookery. It may be argued that there are a number of foodstuffs that do not contain appreciable quantities of fat-soluble vitamine, such as polished rice, lard, bacon fat, etc., but none of these products enters into the dietary in competition with whole milk. Whole milk in the nutrition of the young stands in a class by itself as a great protective food, and any attempt to substitute something inferior, such as filled milk, is to traffic in human lives for monetary gain. Further, it may be argued that filled milk is a wholesome food product. That we do not dispute, but we do most emphatically insist that it is not the equivalent of whole milk—the thing with which it competes on the market. A food may be a menace to health because it contains added poisonous materials, as in the case of added preservatives. Again, it may be a menace to health because it is deficient in certain nutritive essentials. This is exactly the situation in reference to filled milk as compared with whole milk or evaporated whole milk. These foods compete with each other and consequently can be so compared. Further, it may be argued that coconut oil is just as digestible as butterfat; that coconut oil has just as many heat units in it per gram as butterfat. These statements again we do not deny, but it is a long exploded theory that heat units and protein are the sole factors in making up human diets and animal rations.

"We urge Federal legislation that will prohibit the manufacture and sale of filled milks. Such legislation should be passed if for no better reason than that an uninformed public is just as likely to buy the substitute as it is to buy the genuine article, namely, the evaporated whole milk. The nutrition of the American people should always be liberal. For direct consumption we should never allow as valuable a product as whole milk to be in any way modified whereby its nutritive value is lowered. In our animal colonies, especially with rats and pigs, the dangers of respiratory troubles follow so closely upon a low supply of the fat-soluble vitamine in the diet as to make us insistent that there should be no substitute, deficient in this respect,

allowed to creep into the human dietary and displace the one common and constant carrier of these nutritive essentials, namely, whole milk. (See pp. 12 and 13, Bulletin 342, Wisconsin Experiment Station, for data on Danish and Japanese experience.)

"The condition into which the people of middle Europe sank during the war in respect to their nutrition ought to make us emphatically insistent upon the use of a liberal dietary for ourselves and our children. The substitution of the inferior coconut oil for the superior butter fat in a product like milk is a thing that the public should not tolerate for one moment.

"Experiments on rats: I am submitting pictures of rats and chickens showing in the case of the rats the comparative nutritive value of 'filled' and whole milk, and in the case of chickens of skim and whole milk.

"The rats were divided into two groups from the same litter and at approximately 40 grams in weight. They were put upon a purified ration consisting of casein 18, salt mixture 4, agar 2, yeast 2, and dextrin 74 per cent. The casein and dextrin in this ration has been extracted with alcohol so as to reduce its fat-soluble vitamine content. There were four rats in each group. Besides the purified ration one group of rats was allowed 5 centigrams of whole milk per day per individual; the other group 5 centigrams of filled milk diluted with water, 1 to 1 per day per individual. The dilution of the filled milk was done, of course, to make it comparable in solids to whole milk. The group receiving the whole milk grew to weights of 150 to 160 grams per individual in 9 to 10 weeks and 200 grams in 13 weeks. They were sleek, fine specimens as a representative in the photograph shows. Those receiving the filled milk grew to about 80 grams per individual in 9 to 10 weeks, then began to decline, followed by death in 2 to 3 weeks. These results speak for themselves.

"Experiments with chickens: We have also had experiments with baby chicks, comparing skim milk with whole milk in order to determine what would be the difference in effect. Baby chicks as soon as hatched, six in a group, were put upon a ration of white corn 97 per cent, calcium carbonate, 2 per cent, common salt, 1 per cent, and separator skim milk ad libitum. Another group of six baby chicks, same hatch, received the same solid ration but whole milk was substituted for the skim milk. On this skim

milk ration they grew well for six weeks and then began to get ruffled feathers, squatting on their legs, edema of the eyes, terminating in death in one or two weeks longer confinement to the ration. They manifested what poultrymen call "leg weakness" and which is a condition of rickets. (See fig. III.) On the whole milk ration they grew to weights of 500 grams in 12 weeks, and were normal birds in every respect. (See fig. IV.) The pictures of a representative from each group show these differences. These results again speak for themselves as showing the difference between skim and whole milk in that certain highly essential nutritive factors have been removed when the fat has been taken out."

Now, I wish to file for the record a short editorial from the Chicago Tribune of July 24, 1922, on the importance of this problem, entitled "Filled milk."

(The editorial referred to is as follows:)

[fol. 597] "Filled Milk

"Enterprise in the invention of food substitutes and adulterations has not been abolished by our pure food legislation. One of the substitutions which is now getting attention in Congress is 'filled milk.' Very few consumers know what 'filled milk' is, but in 1920, 86,000,000 pounds were produced and in 1921, 64,000,000. 'Filled milk' is condensed milk in which the butter fat has been replaced by other fats, usually cocoanut oil, and experiments have demonstrated that the substitution deprives the product of valuable if not essential elements of food. Hygienists hold that there are no substitutes for butter fat and the conclusion is that 'filled milk' lacks proper nutritive values. It is charged that many merchants sell 'filled milk' as genuine or recommend it as of equal food value. As it may be sold cheaper than genuine milk, it is probable that many people are feeding it to children without knowing its inferiority.

"Naturally the milk producers of the country are opposed to this competition, while the 'filled milk' manufacturers charge that their demand for prohibition is purely selfish. The proposed legislation should not be affected by such an argument. The question is whether it is good public policy to encourage or permit adulteration of food in such forms as may be imposed on public ignorance. The

proponents of the Voigt bill, which is now in the Senate Agricultural Committee, maintain that no labeling act will suffice to protect the public, and that an absolute prohibition of the introduction into interstate commerce of compounds vegetable oils and skimmed milk or products made in semblance of milk is necessary.

"Certainly the situation should be given careful consideration by Congress and no interest of profit should be allowed to outweigh the right of children to be protected from inferior food. Milk is the best of all foods and an essential to the health and growth of children. Every safeguard should be placed about it."

Mr. Holman: I also wish to file for the record a statement from Prof. John H. Frandsen, dairy editor and counselor of the Capper Farm Press, indorsing the legislation.

(The documents referred to are as follows:)

THE CAPPER FARM PRESS,
Lincoln, Nebr., July 12, 1922.

Mr. CHAS. W. HOLMAN,
Washington, D. C.

DEAR MR. HOLMAN: In answer to yours of recent date I am attaching herewith a dairy editorial which I recently prepared for the Capper publications. Probably this will give you the statement you desire for use in connection with your Voigt bill hearings.

The statement on attached card gives my argument as to why milk is necessary for the growing child.

Very truly yours, J. H. Frandsen, Dairy Editor and Counselor.

FILLED MILK MUST GO.

On the 25th of May, the House of Representatives, by a vote of 256 to 40 passed the Voigt bill putting a ban on filled milk, by outlawing the product in interstate commerce. The legislation had the indorsement of the National Milk Producers' Association and of 503 organizations of farmers and women.

All midwesterners who are interested in the health of their children, in agriculture and in the people of the Nation in general, should write to their Senators in Congress asking that they support this bill when it reaches the

Senate. The bill is directed against all brands of filled milk, commonly sold to the general public through the impression that it is condensed milk, but which is actually made out of coconut oils, peanut oil and other vegetable oils, none of which contain vitamines, the most valuable constituent of milk.

Millions of pounds of this bogus milk are manufactured and sold annually to persons, most of whom believe they are buying a certain brand of real milk, but are not. This is true because it is sold as milk. Thousands of innocent purchasers would not buy a substitute if they knew it. (J. H. Frandsen, dairy editor, Capper Farm Press.)

Milk—A Vital Economical Food

Growth requirement principle: In addition to general food value shown in cut on other side, let us never lose sight of the fact that there is now conclusive evidence to prove that milk and the products made from it abound in those vital growth requirements which, practically speaking, can not be supplied except through the use of dairy products. In other words, the mental and physical welfare of children and adults of our Nation depends in great measure upon the use of dairy products.

Milk the best food: Compare children getting an abundance of good, fresh milk with children getting instead tea or coffee. Milk helps children grow. Give them, if possible, a quart a day—certainly not less than a pint.

Milk, a well-balanced food: Milk contains an abundance of muscle building food—protein—so necessary for a growing child, and for adults as well. It also contains quantities of energy material to supply heat and energy needed by the system. Milk contains an abundance of lime and other mineral matter needed for bone, teeth, and blood.

Be sure in buying milk that it is free from disease, clean and fresh. Know that it comes from tested cows or that it is well pasteurized—see that the milk in your home is kept clean, cold, and covered.

Ways of using milk: If for some reason persons do not like to drink milk, remember it can be used in cooking cereals, for puddings and for soup, and in various other ways. (From article on Comparative Food Value of Dairy Products, by Prof. J. H. Frandsen, Department of Dairy Husbandry, University of Nebraska.)

Mr. Holman: Also a short statement which I would like to read from Prof. William G. Geis, head of the department of biological chemistry, college of physicians and surgeons, Columbia University, New York.

Senator McKinley: He is to appear here, is he not?

Mr. Holman: I am not sure.

Senator McKinley: We have asked him.

Mr. Holman: Then I will just file this. He appeared at Albany in favor of the filled-milk legislation, or he made that statement there.

(The statement referred to is as follows:)

"I am in favor of prohibiting the manufacture and sale of 'filled milk.' There is no economic necessity in our country for this imitation and debasement of pure evaporated milk. There is a biological function of butter fat which can not be supplied by any vegetable fat in combination with skimmed milk. The growth of their bodies the quality of their teeth, and the health of the children depend largely upon the milk in the diet. There is no evidence of any satisfactory substitute. There is every evidence against this invasion of cheap vegetable fat."

Mr. Holman: I also wish to file a short resolution that was passed by the President's National Agricultural Conference. You will remember the conference held last spring to which several hundred delegates were invited by the Secretary of Agriculture at the request of the President to consider national agricultural problems. That conference unanimously asked for filled-milk legislation, and I file their resolution as a part of the record.

(The resolution referred to is as follows:)

National Agricultural Conference.

This resolution was passed by the National Agricultural Conference held in Washington, D. C., January 23-27, 1922, at the instance of President Harding:

"The manufacture, sale, and use as food of compounds, consisting of milk from which the butter fat has been taken, and oriental vegetable oils substituted therefor, is a growing menace to the public health and threatens to undermine the dairy industry of the United States. Investigations have shown that the pure food and drugs act does not give

the public the necessary protection against these compounds, and that additional Federal and State legislation is desirable. We therefore urge the enactment of a Federal law to prohibit the introduction into interstate commerce of compounds of vegetable oils and skimmed milk or products made in the semblance of milk. We further urge the passage by the various States of additional legislation prohibiting the manufacture or sale of such imitation compounds, and close cooperation between Federal and State enforcement authorities in the detection and prosecution of violators of such laws.

Mr. Holman: The statement was made yesterday, I believe by one of the gentlemen, that it was the concensus of opinion that the New York law was not to be enforced. Is that correct?

[fol. 598] Mr. Jackman: No. I think you misunderstand that.

Mr. Holman: I was not in at the time, and that was brought to my attention.

Senator McKinley: Well, that would be just theory, anyhow. What has that got to do with it?

Mr. Jackman: The statement was made that it was a very serious question as to whether the New York law, in view of the decisions in the oleomargarine cases, could be sustained, in view of those rules, where the record of the testimony would undoubtedly show that nothing was added to make it in semblance of milk. That is, that there was no particular coloring matter added. In the oleomargarine cases they held you could not prohibit the sale of oleomargarine unless they added some coloring matter to make it resemble butter. If the natural state, from the natural ingredients, tends to make it look like butter, you could not prohibit the sale of oleomargarine. That was the statement that was made.

Mr. Holman: Still I believe it has been held that palm oil in its natural state is used to color oleomargarine, but it constitutes an infraction.

Mr. Jackman: That is the Jelke case; in which the testimony showed that palm oil was not ordinarily a constituent of oleomargarine, and the court found that the sole purpose in the addition of the palm oil was to make it look like butter, but in the case of State *v.* Essex, which is the last case on the subject in Wisconsin, they held that where the oleomargarine resembled butter, some shades of butter,

the law had to be yellow butter as June butter, and that there were varying shades that could not be prohibited, the testimony showing that they used cottonseed oil in the nut margarine butter used.

Mr. Holman: I myself could not see how that reference could be pertinent to the bill, but inasmuch as it has been raised, I was in New York last week, and I made inquiries and was informed that the enforcement, so far as retail selling, will begin very shortly.

Mr. Chairman, there are two points left only of my statement, one involving the question of veracity, which was made with the full committee present; and the other involving the question of the charge of conspiracy, which was also made with the full committee present, and I should like to ask permission to conclude my statement in that respect when the other gentlemen return.

We would like to introduce Mr. Dallas H. Berry.

Mr. Jackman: Could I ask you a question or two to see if I misunderstand you?

Mr. Holman: Certainly.

Mr. Jackman: You spoke, Mr. Holman, in the early part of your statement, with reference to the semblance of milk, and your objection, if I understood you, to the sale of the compound, was based on the fact that it looked like milk?

Mr. Holman: And other objections.

Mr. Jackman: I am speaking primarily about this question of semblance. If this product were of a different color than milk, would you have any objection to it on the ground of semblance?

Mr. Holman: You mean like black?

Mr. Jackman: No; I don't mean like black.

Mr. Holman: Or chocolate color.

Mr. Jackman: Supposing it was chocolate color, and supposing it was a yellow color, for instance, the yellow co' of some of these compounds which were here on the table yesterday.

Mr. Holman: In such case I would not object on the ground of semblance to milk.

Mr. Balderston: There are other kinds of semblance than color.

Mr. Jackman: I am asking this not with an idea of heckling at all, but simply for the purpose of understanding your position.

This bill, as I understand it, would permit the manufacture of compounds of skim milk and any fat or oil, whether it be vegetable fat or whatever it be, if the resulting product was not in semblance of milk, so that if the ordinary milk color of whole milk, which is white or slightly cream, were at all changed—if it was yellow or pink or any other shade—it would not be within the prohibition of this bill. That is as I understand it. Do you understand it the same way?

Mr. Holman: No. Your definition of semblance and mine appear to differ.

Mr. Jackman: I am taking the legal definition of semblance.

Mr. Holman: Suppose you read it.

Mr. Jackman: You know what that is in the oleomargarine case. It means the intentional putting in of some compound or some article to make it appear like butter.

Mr. Holman: I would go much further in my definition of what semblance means than Mr. Jackman. It may look like milk or taste like milk or have the general smell of milk, and it may not be readily detected except by chemical analysis as to whether it is a compound or the genuine. Those factors are, it seems to me, included in the words "semblance of milk."

Mr. Jackman: Milk has a certain standard color. We all know what that is without defining it.

Mr. Holman: There are some variations.

Mr. Balderston: Do you mean evaporated milk or the whole natural milk?

Mr. Jackman: Evaporated milk; one can looks like the other, of evaporated whole milk.

If that were colored yellow, then, it would not be within the provisions of this bill, and I understand you to say that your main objection to the sale of the compound was based upon the fact that it could go into competition with milk because of the resemblance in the color.

Mr. Holman: No; you must have misunderstood me. My main objection was that aside from the economics was the question of fraudulent sale that developed out of this resemblance of the imitation product of a compound to the genuine.

Mr. Jackman: Of course you know that Congress has not any power to legislate on the question. I do not want to get into a legal discussion.

Mr. Balderston: There is no lawyer here on our side.

Mr. Holman: I will not attempt to argue any legal question.

Mr. Jackman: You know, of course, in your discussions, that this is a matter with reference to the fraudulent sales which is strictly within the States, and Congress can only legislate on interstate commerce if it concerns the health and if it is a deleterious product. Now, what I had in mind is this: If your objection resolves itself down to one of appearance, the health feature would not be affected whether it was colored black or blue or yellow.

Mr. Holman: That is only one of the objections that I am making, and I reiterate that it is because of the fraudulent character of the article, one of the big reasons.

Mr. Jackman: Then let me ask you this: Would you gentlemen object to this bill if it were amended so that, for example, the product could be sold if it were colored brown or chocolate color?

Mr. Holman: That is a matter we would have to go into conference on. We are backing this bill as it was originally introduced by Mr. Voigt.

Mr. Jackman: Well, of course there is not any use of our arguing on it. If you don't want to answer the question direct, that is all right.

Mr. Holman: We did not draw the bill.

Mr. Jackman: You quoted Doctor Larson?

Mr. Holman: Yes.

Mr. Jackman: You knew Doctor Larson in his statement before the House committee, for example, on page 119, stated that he knew nothing of the food value of the substitute because he had made no investigation along that line?

Mr. Holman: I would suggest that if the committee is not satisfied that Doctor Larson represented the views of the Department of Agriculture the committee request that he be recalled to the stand.

Mr. Jackman: Let me read this into the record, then, just for a moment. This is on page 119:

"Mr. Hays: Doctor Larson, may I ask you a series of questions? As I understand, you are opposed to this business that puts the substitute on the market because it injures the dairy business?

"Doctor Larson: That is the only point I have made.

"Mr. Hays: You also stated that you knew nothing of the food value of the substitute, because you had made no investigation along that line?

"Doctor Larson: That is right."

Mr. Holman: Yes. Doctor Larson testified primarily as to the economics of the industry, and very rightly refused to commit himself on a question which did not involve his sphere of work.

Mr. Jackman: You know, of course—you spoke about cottonseed oil—that that is one of the very large constituents used in the oleomargarine manufacture?

Mr. Holman: Oh, yes; very largely.

Mr. Jackman: And also used in Cotolene and Crisco, and those things for cooking?

Mr. Holman: Yes. I think it makes a fine use for it in Crisco and other things of that kind. I am not so sure about the margarine matter, and I doubt if you are.

Mr. Jackman: What?

Mr. Holman: I doubt if you are.

Mr. Jackman: Doubt if I am what?

Senator McKinley: Well, that has got nothing to do with this milk business.

Mr. Holman: Mr. Chairman, we would like to ask Mr. Dallas Berry, the president of the Maryland-Virginia Milk Producers' Association, to speak for one or two minutes.

[fol. 599] Statement of Mr. Dallas Berry, President Maryland-Virginia Milk Producers' Association

Mr. Berry: Mr. Chairman, I was very much interested yesterday when Mr. Balderston was testifying as to the result he had found in looking up prices in some of the stores in the city on canned milk, and it occurred to me that it might be interesting to the committee to know what price the whole milk was selling for in those same stores, so yesterday afternoon when I left here I went in a number of these stores and inquired what they were selling whole milk for. Now, I did not go into the identical stores that he went in, but I took the chain stores where the prices are the same in all of them, all over the city. First I went to the Old Dutch Market. I understood from Mr. Balderston that he found that in the Old Dutch Market they were selling Hebe at 10 cents a can and Carnation at 10 cents a can. I found that they were selling whole fresh milk at 11 cents a quart. I understand it takes about a quart of whole milk to make a can of this preparation.

Then I went to the Sanitary store, and, as I recall, Mr. Balderston said that they were selling Challenge brand at 15 cents a can, Rogers at 9 cents a can, and Borden's at 10 cents a can. They were selling whole fresh milk at 11 cents a quart.

I then went to the Atlantic and Pacific store. They were selling Dairymen's League canned milk at 9 cents a can. They were selling whole fresh milk at 11 cents a quart.

The Piggly Wiggly stores do not handle fresh milk. Then I went to a store that Mr. Balderston did not visit. That is what is known here as Kidwell's Market. They have got a number of these stores throughout the city. I don't know just how many. I asked them if they were selling any canned milk and they said yes, they were selling milk at 10 cents a can. I asked them what the price was on whole fresh milk and they said that it was 10 cents a quart.

Now, this milk is all from tuberculin-tested cows. Many of the herds are on the Federal accredited list. All these dairy farms are under the strict supervision of the health officer.

It has been claimed that these canned products do not come in competition with the whole-milk market. That I do not believe, and I do not believe that it can be substantiated by anybody, because of the fact that these people who are putting out these products have almost unlimited means to advertise the product. They are put up in attractive packages. A great many people who do not thoroughly understand the food value of these products are buying them in preference to whole milk.

From the evidence that has been presented here I do not think there is any question but what this involves a matter of health to a large degree, but speaking from a practical dairyman's viewpoint, I believe that it involves to a very much larger degree an economic question that we can not fail to look at. We all know that dairy cows are almost necessary on all the farms in almost all sections of this country. If we are brought in competition with a product that is going to discourage these men from keeping dairy cows on the farm, and they go off, and when they go off the fertility of the soil goes with them.

Something, in fact a great deal, has been said here about the effect on the foreign population that comes to this country. Now, I may have the wrong view of this thing, but it seems to me that our duty first is to consider Americans and

American industries, and then if we have anything that we can do after that to help out the people who seek refuge in this country because they find conditions are better than in the country that they left, I say do all you can for them.

As the president of the Maryland-Virginia Milk Producers' Association, we had an occasion recently to visit many dairy farms. We are reorganizing our association, and I am called upon to do a great deal of field work, and I want to say this, that in the 22 years that I have been producing milk for the Washington market I have never seen as much unrest among the dairymen as I find right now. It is due largely to the fact that for the past several months they have been barely getting the cost of production for their milk. But I find it is largely due also to the fact that they have gotten knowledge of the fact that this filled milk is coming on the market in competition with them.

Now, they all have common sense enough to know that they can not compete with a product that is made of skim milk and vegetable fat that costs about 12½ cents a pound. People who otherwise would be disposed to increase the size of their herds, which of course means increased fertility of the soil, are now hesitating because they are afraid of the competition that they are going to be up against.

Mr. Urion: I would like to ask one question, if I may. How much per hundred pounds do the dairymen get for this milk?

Mr. Berry: Well, sir, we don't sell milk here by the hundred pounds. We sell it by the gallon.

Mr. Urion: How much do they get a gallon?

Mr. Berry: They get 24 and 25 cents a gallon for 3.5 milk. Now, there are same dairymen here who are paying a premium for high brand score, and of course we are getting a premium for butter fat.

Mr. Jackman: How much extra for each half per cent of butter fat?

Mr. Berry: Four-tenths of 1 per cent for every point.

Mr. Jackman: Did you make any inquiry at the Old Dutch Market as to what any evaporated milk or Hebe was selling for?

Mr. Berry: No, sir; I did not. I just went in and asked them the price on whole milk. I did not tell them what I wanted to know for, or anything else.

Mr. Jackman: That did not include any delivery at any place?

Mr. Berry: No, sir.

Mr. Jackman: That is a cash and carry proposition?

Mr. Berry: Yes, sir. The same applies to the bottle milk, the whole milk.

Mr. Balderston: May I just ask one question? I wanted just to bring out the fact that I think you referred to, that a quart of whole milk is approximately equal in value to a can of evaporated milk?

Mr. Berry: That is what I understand it is.

Mr. Balderston: As to its content?

Mr. Berry: Yes, sir.

Mr. Balderston: Except for the water extracted.

Mr. Loomis: Mr. Chairman. I have also been waiting to make a very brief statement of a somewhat privileged character.

Senator McKinley: All right.

Further Statement of Mr. A. M. Loomis, Secretary of the National Dairy Union, Washington, D. C.

Mr. Loomis: I previously made a statement, and have nothing here which will duplicate anything I said before.

I might add that in addition to appearing here as secretary to the National Dairy Union, I am also assistant to Doctor Atkeson the Washington representative of the National Grange, with offices at 630 Louisiana Avenue.

I prepared this statement with some little care, because it has to do with this question of conspiracy which has been raised here by counsel for the opponents of the bill.

I have been somewhat reticent about making the statement which I am about to make to the committee for two reasons, first, because I have been of the opinion that I am about to say unduly dignifies a charge made by the opponents of this bill at the outset of their hearing which was then but a part of the smoke screen of an attorney used to court-room tactics instead of the dignified probing for facts which marks congressional committee hearings and which later on they themselves found to be entirely unwarranted and outside any possible interest to this committee, and second, because what I have to say about such charges is purely negative, of a kind of so much of the testimony adduced here by the opponents of this bill, and which negative testimony I know has little or no weight under any rule of evidence, and least of all in the minds of the three experi-

enced and broadly interested Senators who have been conducting this hearing.

At the same time, and after three days' deliberation, I have reached the conclusion that I can not afford to sit silent and let the record of this case be concluded without entering my protest, my resentment, and my emphatic denial of the charge of conspiracy definitely made by the opponents of this legislation at the opening of their case. I wish to emphasize this resentment and denial by calling to the attention of the committee the entire absence of supporting testimony.

I can speak definitely and as an officer of the National Dairy Union. This is an organization made up chiefly of creamerymen. It is incorporated and conducts business in an orderly manner, with records available to any person authorized to inquire. It has on its directorate a fair representation of the dairy industry of the United States. Its support and approval of legislation which will protect the public against the fraud inherent in filled milk, filled cream, filled ice cream, oleomargarine, and the other imitation dairy products, and in favor of this bill in particular, has never been induced, suggested, discussed, or considered in any way, shape, or manner with any interests outside its own membership and officials. We favor this measure because we know it will prevent a great source of fraud, and protect and assist in the development of a great nationally essential industry.

I am not the official representative of the National Grange, but I am his assistant. I am familiar with every activity which the National Grange has entered into in support of this measure, and I was not only here when Dr. T. C. [fol. 600] Atkeson, that representative, told this committee unqualifiedly that the National Grange and all it represented was in favor of legislation to put filled milk out of interstate commerce, and the reasons for such position, emphasizing the fraud which was the key of this situation, but I was present at the meeting of the National Grange when the resolution was adopted under which Doctor Atkeson, as Washington representative, acted with full authority in making this statement to this committee. The National Grange is a great body of real fraternal brotherhood joining hundreds of thousands of farmers and their families together throughout this country, and as a member of that fraternity and as a semiofficial representative of it, I feel that I

would be remiss in my duty and obligation of fraternity if I did not express the resentment which I feel every member will feel, and will be justified in feeling, when they know of the charges which have been made here. I make this statement with extreme regret, because of the fact reported to me that these charges were made here by a member of this fraternity.

I do not believe this committee needs my denial of a charge that the National Grange is a party to a conspiracy. However, this is my denial of such a charge. I think I should state also in this connection that I fully believe that the charge was made entirely under misapprehension of the real facts, and that many persons who came to this hearing believing because of the propaganda that had been pumped into their ears by the opponents of this bill and their hired advertising and propaganda agents that it was a trade war, have become convinced since coming here that what trade war there is here has its initiative on the other side, and now know that the dairy interest is here fighting for its life, as well as for the general welfare of the whole people and sincerely sorry for the one single group of people making an imitation milk who have tried in a large way to protect the public and properly merchandise their products.

Mr. Holman: Now, may I resume, Mr. Chairman?

Senator McKinley: Yes, sir.

Further Statement of Mr. Charles W. Holman.

Mr. Holman: Before making the statement which I intend to make I want to go a little further into the question of fraud. Up to this stage of the hearings we have discussed the labeling on the outside of the package. I now invite you to look at the inside of the cans. Here are two cans opened just a minute ago. You can see what the color and semblance and taste of the two articles will be. I am now pouring from a can of Hebe. This can was bought yesterday, August 4, 1922, in this city.

I am now pouring from a can of Carnation evaporated milk, which was purchased on the same day and in the same store, both manufactured by the same organization, and I defy any person present, if their eyes were blindfolded and the two glasses that I am now holding were mixed, to tell me which is the Hebe and which is the Carnation.

You will note the taste, color, the looks, and smell are approximately the same.

It is with great reluctance that I now approach the discussion of one phase of the testimony which has been introduced, because personally I did not consider it of any real importance; and yet twice before the committee a charge has been made that I personally have attempted to deceive the general public in publicity material for which I am responsible, prepared under my direction. Reference was made to a press bulletin which was prepared under my direction, for which I am responsible and which I stand behind. In a box the headline appeared, "Eleven States that bar filled milk within their borders." Of course, the gentlemen of the opposition realize that they are quibbling over the term "bar." May I have the Supreme Court of Wisconsin decision? In that box reference is made to the States of Ohio, Wisconsin, California, Colorado, Oregon, New York, New Jersey, Utah, Maryland, Florida, and Connecticut. I desire to read three paragraphs from the decision of the Supreme Court of Wisconsin, January Term, 1922, under section 3, dealing with the history of legislation relating to filled milk, in which the following occurs:

"The laws prohibiting filled milk now in force are of three general types:

"1. Laws which directly prohibit the manufacture and sale of filled milk. Of this type are the laws of New Jersey, New York, and Wisconsin.

"2. Laws which prescribe standards for condensed or evaporated milk which have the effect of prohibiting the manufacture and sale of filled milk. Of this type are the laws of Colorado, Connecticut, Florida, Maryland, and Ohio.

"3. Laws which permit filled milk to be sold as 'imitation milk' under restrictions to prevent fraud. These restrictions are so severe as to be practically prohibitive. These are the laws of California, Oregon, and Utah."

Those are the States referred to in the box which the gentlemen take exception to.

I also wish to file an analysis of these laws prepared by Mr. E. E. Witte, of the Legislative Reference Library of

the State of Wisconsin, Madison, Wis., under date of June 1, 1922.

Mr. Jackman: He is not a lawyer.

Mr. Holman: The reference, however, is to the chapters and to the laws.

(The document referred to is as follows:)

An Analysis of the Laws of Various States Relating to Filled Milk.

[By E. E. Witte, Legislative Reference Library, Madison, Wis., June 1, 1922.]

The laws relating to filled milk now in force can be grouped under four general types:

1. Laws which directly prohibit the manufacture and sale of filled milk.

2. Laws which prescribe standards for condensed or evaporated milk which have the effect of prohibiting the manufacture and sale of filled milk.

3. Laws which permit filled milk to be sold as "imitation milk" under restrictions to prevent fraud.

4. Laws defining condensed and evaporated milk in such a way that filled milk can not be sold under these names but permitting it to be sold under a name which distinguishes it from condensed or evaporated milk.

Laws of the first two types have the effect of entirely prohibiting the manufacture and sale (for domestic consumption) of filled milk.

Laws of the third type while permitting filled milk to be manufactured and sold, place such restrictions about it as to make them, in effect, prohibitive.

Laws of the fourth type do not go further than to prohibit the sale of filled milk as condensed or evaporated milk.

1. Laws Which Directly Prohibit the Manufacture and Sale of Filled Milk.

New Jersey (Ch. 110, Laws of 1922): Prohibits the manufacture and sale of condensed or evaporated milk to which has been added, blended or compounded any fats or oils

other than milk fats. Provides, however, that condensed or evaporated skimmed milk may be sold as such, provided that it is conspicuously labeled.

New York (Ch. 365, Laws of 1922): Prohibits the manufacture and sale of condensed evaporated, etc., milk to which has been added any fats or oils other than milk fats, in semblance of milk or condensed milk. Condensed skimmed milk may be sold as such in containers containing at least 40 pounds, if conspicuously labeled.

United States: Bill H. R. 8086, which passed the House of Representatives May 25, 1922, yeas 250, nays 40 (Cong. Record, p. 8329), and which is now pending in the Senate, prohibits the manufacture and possession of filled milk in the District of Columbia or in any Territory, and the shipment or delivery for shipment in interstate and foreign commerce of filled milk. This term is defined to include all milk and skimmed milk whether or not condensed or evaporated which has been blended or compounded with any fat or oil other than milk fat, so that the resulting product is an imitation or semblance of milk, skimmed milk, condensed or evaporated milk.

Wisconsin (Ch. 409, Laws of 1921): Prohibits the manufacture of sale of condensed or evaporated milk or any other derivatives of milk to which has been added any fat or oil other than milk fat.

II. Laws Prescribing Standards for Condensed or Evaporated Milk Which Have the Effect of Prohibiting the Manufacture or Sale (for Domestic Consumption) of Filled Milk.

Colorado (Ch. 68, Laws of 1913, as amended by Ch. 97, Laws of 1921, sec. 10): Prohibits the manufacture or sale of condensed milk which does not have a specified solid and butter fat content. Until the amendment in 1921 there was no provision in the laws of Colorado relative to skimmed condensed milk. This amendment permits condensed skimmed milk to be sold in bulk when labeled in accordance with the rulings of the State dairy commissioner. (This is a statute similar to the Ohio law noted below, which has been construed by the United States Supreme Court as prohibiting the manufacture and sale of filled milk. The Colorado law, however, does not provide definitely that condensed milk must be made of whole

milk, but the standards as to solid contents and butter fat probably rendered this necessary.)

Connecticut (Laws of 1911, ch. 211, sec. 7; secs. 2471, 2473, General Statutes, Revised 1918): Prohibits the sale of "adulterated condensed" milk which is defined as con- [fol. 601] densed milk which does not have a specified solid and fat content, or to which any foreign substance other than sugar has been added.

Florida (ch. 6203, Laws of 1911; secs. 2047 and 2048, Revised General Statutes, 1920): Prohibits the manufacture or sale of condensed or evaporated milk which is not made of pure milk from which no part of the cream has been removed and which does not contain specified percentages of milk solids and butter fat.

Maryland (Laws of 1920, ch. 348): Prohibits the manufacture or sale of condensed evaporated or preserved milk which is not manufactured from pure milk from which no part of the cream has been removed and which does not have certain high specified percentages of milk solids and butter fat. Permits, however, the sale of condensed milk for manufacturing purposes in containers of not less than 10 pounds, provided that it is conspicuously labeled.

Ohio (Laws of 1886, ch. 159; sec. 12725, General Code, 1920): Prohibits the manufacture or sale of condensed milk which is not made from whole milk and which does not have a solid content equivalent to 12 per cent in whole milk and a butter fat content equivalent to 3 per cent. There is no provisions in the laws of Ohio for the sale of condensed skimmed milk. The State authorities accordingly construed this section as prohibiting the sale of filled milk in Ohio. This construction was upheld by the United States Supreme Court and the statute as thus construed held not to conflict with the fourteenth amendment in Hebe Co. *v.* Shaw (248 U. S. 297, April, 1921).

III. Laws Which Permit Filled Milk to be Sold as "Imitation Milk" Under Restrictions to prevent fraud

California (Stats. of 1919, p. 89): "Imitation milk" is defined to be any mixture or compound made of milk, skimmed milk, condensed or evaporated milk, or any semblance thereof to which has been added any edible oil or fat other than natural milk fat. Such imitation milk may be manufactured only in factories which have been licensed

by the State dairy bureau. It may be sold only by licensed wholesale and retail dealers, and must be branded in conspicuous type as "imitation milk," with the added statement "not suitable for infant food." Both dealers and eating places using this product must display conspicuously a sign "Imitation milk used and served here."

Oregon (Ch. 157, Laws of 1921): Places substantially the same restriction upon the manufacture and use of "imitation milk" as does California.

Utah (Laws of 1921, ch. 45): Places substantially the same restriction upon the manufacture and use of "imitation milk" as does California.

All three of these States which are the only States in the Union which specifically permit the use of imitation milk, have statutes which define condensed or evaporated milk as being made of whole milk, and in addition prescribe a high solid and butter fat content.

IV. Laws Defining Condensed or Evaporated Milk in such a way that Filled Milk can not be sold as Condensed or Evaporated Milk, but permitting it to be sold when not thus Labeled.

The Bureau of Animal Industry of the United States Department of Agriculture in a bulletin on Legal Standards for Dairy Products, issued in 1919 as a typewritten bulletin, lists 31 States as having standards for condensed or or evaporated milk, which were adopted either by an act of the legislature or by some administrative body under legislative authority, which prescribes the percentage of solids and butter fats. These States are Arizona, California, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Hampshire, New York, North Carolina, North Dakota, Ohio, Oregon, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, Wisconsin, Wyoming. In addition to the States listed in this bulletin, Connecticut and Florida have laws prescribing standards for condensed milk.

The most usual standard in these laws copies verbatim the standards prescribed by the United States Department of Agriculture under the Federal pure food and drug act, which reads as follows:

"Condensed milk, evaporated milk, concentrated milk, is the product resulting from the evaporation of a considerable portion of the water, from the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within 15 days before and 10 days after calving, and contains, all tolerances being allowed for, not less than 25.5 per cent of total solids and not less than 7.8 per cent of milk fat.

"Sweetened condensed milk, sweetened evaporated milk, sweetened concentrated milk is the product resulting from the evaporation of a considerable portion of the water from the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within 15 days before and 10 days after calving, to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than 28 per cent of total milk solids, and not less than 8 per cent of milk fat.

"Condensed skimmed milk, evaporated skimmed milk, concentrated skimmed milk is the product resulting from the evaporation of a considerable portion of the water from skimmed milk, and contains, all tolerances being allowed for, not less than 20 per cent of milk solids.

"Sweetened condensed skimmed milk, sweetened evaporated skimmed milk, sweetened concentrated skimmed milk is the product resulting from the evaporation of a considerable portion of the water from skimmed milk to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than 28 per cent of milk solids."

There are two types of variations from the standards of the United States Department of Agriculture in the definitions of some of the State statutes. Some of these laws do not define condensed milk as being made of whole milk, and others give slightly different percentages for solid and butter fat content. Nearly one-half of the States listed have either copied the Federal standards verbatim or state that the Federal standard shall govern. The variations noted also are believed not to have the effect of permitting filled milk to be sold as condensed or evaporated milk. Without more definite provisions relating to filled milk, such as have been noted under I, II, and III, above, however, these laws do not absolutely prohibit the manufacture and sale of filled milk, but have the effect only of

preventing its being sold under the name of evaporated or condensed milk.

Mr. Holman: Since the time that this box was put out, Senator Ladd, we have discovered that there is a difficulty in enforcing what was undoubtedly the intention of the Connecticut law, owing to the fact that the definition governing the restriction of condensed skim milk does not appear to apply to evaporated. In our study of legislation made, of course, by laymen, we started with the understanding that two or three States had these laws, and as we kept on we found more States, and the result of that bulletin was what we want understood to be the exact facts at that time. If there is an error of any kind in our statements, or if there is an error in the statement of the Wisconsin Supreme Court, then I don't feel at all embarrassed, and at this time I should like to ask to have spread upon the records the decision of the Wisconsin Supreme Court, which deals with this problem the committee is considering. I have here the majority opinion prepared by Mr. Justice Crownhelt and the concurring opinion prepared by Justice Rosenberry, a copy of which was received by me from Commissioner J. Q. Emory, State dairy and food commissioner of the State of Wisconsin.

Senator Kendrick: Have those decisions not been included in the record?

Mr. Holman: Not as yet.

Mr. Balderston: Only the referee's report.

Mr. Holman: I am asking that the decision of the court be now included.

(The decision referred to is as follows:)

Supreme Court, State of Wisconsin, January Term, 1922.

State of Wisconsin upon the relation of Carnation Milk Products Company, a corporation, and the Hebe Company, a corporation, plaintiffs, *v.* J. Q. Emory, as dairy and food commissioner of the State of Wisconsin, defendant. An action under the original jurisdiction of this court, upon the relation of the plaintiffs corporations to enjoin the defendants from enforcing the provisions of chapter 409, of the Laws of 1921, this State, as against the plaintiffs, so far as the same applies to the manufacture and sale by the plaintiffs of the product known as Hebe.

Upon the filing of the complaint, an answer was served, raising certain issues of fact, which were referred to a referee for his findings. Chapter 409, in so far as it affects the plaintiffs, is as follows:

"2. It shall be unlawful for any person, firm, or corporation, by himself, his servant or agent, or as the servant or agent of another, to manufacture, sell or exchange, or have in possession with intent to sell or exchange, any milk, cream, skim milk, buttermilk, condensed or evaporated milk, powdered milk, condensed skim milk, or any of the fluid derivatives of any of them to which has been added any fat or oil other than milk fat, either under the name of said products or articles or the derivatives thereof or under any fictitious or trade name whatsoever."

The plaintiffs manufacture and have in their possession for sale Hebe, which is a compound composed chiefly of milk from which the butter fat has been extracted and coconut oil injected in place of the butter fat.

[fol. 602] Plaintiffs contend that this provision of law as applied to their business is in contravention to the fourteenth amendment to the Constitution of the United States and similar provisions of the State constitution and to the commerce clause of the Federal Constitution.

Hebe is manufactured by the Carnation Milk Products Co. in Wisconsin, and its entire product sold to the Hebe Co. The Hebe Co. sells the compound to jobbers and wholesalers only. The compound contains 92.2 per cent skimmed milk or buttermilk and 7.8 per cent of coconut oil similarly evaporated as condensed milk. It is similar in taste, odor, appearance, consistency, and manner of packing to evaporated milk. The butter fat extracted from the milk is much more expensive than the coconut oil injected into the milk to take the place of the butter fat. Hebe can therefore be sold, and is sold, to wholesalers and retailers cheaper than the genuine evaporated or condensed milk.

The compound has been manufactured in the State for the last five years, while condensed or evaporated milk has been manufactured and on the market for the last 25 or 30 years. The compound is not deleterious in itself, but is not of the same quality or food value as the genuine evaporated milk. It is lacking in a certain chemical substance known as vitamines A, which are essential elements of a proper dietary. These vitamines may be supplied by other foods. It is ad

mitted that the compound is not a proper substitute for the genuine for infants.

Hebe has been extensively advertised as a substitute for milk, through the press and magazines, and by means of cookbooks, prepared by the Hebe Co. It has been advertised in the newspapers of Wisconsin as "milk," "milk compound," and "compound of milk." It has been sold by retailers in Wisconsin as "milk" or "evaporated milk."

There have also been advertised and sold four other similar compounds in the State of Wisconsin, either as "milk" or "compound of milk." These compounds are also shipped out of the State and advertised and sold in other States as substitutes for evaporated milk.

In some cases the compounds are sold by the retailers at the same price as the genuine evaporated milk. The compounds have been variously labeled at different times to indicate that they were more or less equivalent to or better than the genuine evaporated milk. At the time of the commencement of this action, Hebe was labeled "A compound of evaporated skimmed milk and vegetable fat. Contains 7.8 per cent vegetable fat, 25.5 per cent total solids." On the margin of the label was printed "for cooking and baking—do not use in place of milk for infants."

The Carnation Milk Products Co. has an investment in its plants in Wisconsin of about $650,000, and of this about $50,000 in its plants is used for the manufacture of Hebe.

I

CROWNHART, J.: It is but trite to say that the constitution of our State is the supreme law. Therein will be found the powers of the executive, legislative, and judicial branches of government, each supreme in its field but coordinate in their sources of powers and the exercise thereof.

The greatest deference must be paid by each department to the other acting within the scope of its powers. Any usurpation of power by one department at the expense of another is a wrong against the people who adopted the constitution as their charter of liberties and rights.

To the legislature was given the power to enact laws not in contravention to the constitution. A law so enacted becomes the public policy of the State. (Borgnis v. Falk Company, 147 Wis. p. 351.)

Before a statute can be said to be unconstitutional the statute must lack in public purpose "so clear and palpable

as to be perceptible to the mind at first blush," so said the great Chief Justice Dixon, who sat in the constitutional convention and helped frame the charter of our State. (Brodhead *v.* Milwaukee, 19 Wis. p. 686.) "We must bear in mind," said Chief Justice Winslow, "the well-established principle that it (the statute) must be sustained unless it is clear beyond reasonable question that it violates some constitutional limitation or prohibition." (Borgnis *v.* Falk Company, 147 Wis. p. 348). "The rule of all courts," said Justice Bardeen, "is that a statute will be declared unconstitutional only when it is shown beyond reasonable doubt that it conflicts with the fundamental law. It is equally true that the courts will seek every reasonable mode of reconciliation of the statute with the constitution, and it is only when reconciliation has been found impossible, that it will be declared void." (State ex rel. Hicks *v.* Stevens, 112 Wis. p. 172.) Said Mr. Justice Dodge: "We must and do concede to the legislative branch of the government the fullest exercise of discretion within the realm of reason, and if a public purpose can be conceived which might rationally be deemed to justify the act, the court can not further weigh the adequacy of the need or the wisdom of the method." (State ex rel. Zillmer *v.* Kreutzberg, 114 Wis. p. 549.) The courts will presume in favor of the constitutionality of the acts in a case of doubt and sustain them. (State ex rel. Brayton *v.* Merriman, 6 Wis. 14; Smith *v.* Mariner, 5 Wis. 541; In re Oliver, 17 Wis. 681; State ex Rel. Kellogg *v.* Curtens, 111 Wis. 431; Northwestern National Bank of Superior *v.* City of Superior, 103 Wis. 43.)

The United States Supreme Court has declared equally emphatically in favor of sustaining acts of Congress and the statutes of States. (Price *v.* Illinois, 238 U. S. 446; Rast *v.* Van Deman & L. Co., 240 U. S. p. 357; Hebe Co. *v.* Shaw, 248 U. S. p. 303.)

Cooley on Constitutional Limitations, page 238, says:

"The rule of law upon this subject appears to be that, except where the Constitution has imposed limits upon the legislative power it must be considered as practically absolute, whether it operate according to natural justice or not in any particular case. The courts are not the guardians of the rights of the people of the State, except as those rights are secured by some constitutional provision which comes within the judicial cognizance. The protection against

unwise or oppressive legislation, within constitutional bounds, is by an appeal to the justice and patriotism of the representatives of the people. If this fail, the people in their sovereign capacity can correct the evil; but courts can not assume their rights. The judiciary can only arrest the execution of a statute when it conflicts with the Constitution. It can not run a race of opinions upon points of right, reason, and expediency with the lawmaking power. Any legislative act which does not encroach upon the powers apportioned to the other departments of the government, being prima facie valid, must be enforced, unless restrictions upon the legislative authority can be pointed out in the Constitution, and the case shown to come within them."

Again on page 239:

"Nor are the courts at liberty to declare an act void, because in their opinion it is opposed to a spirit supposed to prevade the Constitution, but not expressed in words."

II

The act sought to be avoided was passed in the exercise of the police power of the State.

The police power covers all matters having a reasonable relation to the protection of the public health, safety, or welfare. (McLean *v.* Arkansas, 211 U. S. 539.)

As applied to food, this authority extends to requiring a fixed minimum amount of nutritional elements. (Hutchinson Ice Cream Company *v.* Iowa, 242 U. S. 153; Hebe Company *v.* Shaw, 248 U. S. 297.)

The police power also has an especially appropriate field of action in the prevention of fraud and deception. (Hall *v.* Geiger-Jones Company, 242 U. S. 539.)

It may be legitimately exercised against even the occasional fraud not inherent in the business or product, and *a fortiori* against the fraud that is inherent in it. (Merrick *v.* Halsey Company, 242 U. S. 568.)

It extends further, and embraces the right to prohibit all things which constitute obstacles to a greater public welfare (Rast *v.* Van Deman & Lewis, 240 U. S. 342) and to do whatever will promote the general convenience or the general prosperity (Bacon *v.* Walker, 204 U. S. 311), including even such matters as the preservation of the reputation of a great industry of the State against injury in markets outside of the State. (Sligh *v.* Kirkwood, 237 U. S. 52.)

Given a legitimate subject for the exercise of the police power, it is for the legislature to adopt such measures as it may deem necessary to make its action effective, so long as they have reasonable relation to that end. (Purity Extract Co. *v.* Lynch, 226 U. S. 192.)

The measures which the legislature may adopt for such purpose may be either regulatory or prohibitory, whichever the legislature deems the more effective method of accomplishing the result (Silz *v.* Hesterberg, 211 U. S. 31), and they may be either in the form of general directions or of detailed measures against a particular article. (Price *v.* Illinois, 238 U. S. 448.)

Accordingly, the authority of the legislature to prohibit an article is not affected by the fact that the article may be truthfully labeled (Hebe Co. *v.* Shaw, 248 U. S. 97) or that the law will result in destroying the value of property devoted to the manufacture of such article. (Mugler *v.* Kansas, 123 U. S. 623.)

"At an early day it (the police power) was held to embrace every law or statute which concerns the whole or any part of the people, whether it related to their rights or duties, whether it respected them as men or citizens of the [fol. 603] State, whether in their public or private relations, whether it related to the rights of persons or property of the public or any individual within the State. (New York *v.* Miln, 11 Pet. 102, 139.) The police power, in its broadest sense, includes all legislation and almost every function of civil government. (Barbier *v.* Connolly, 113 U. S. 27.) It is not subject to definite limitations, but is coextensive with the necessities of the case and the safeguards of public interest. (Camfield *v.* United States, 167 U. S. 518, 524.) It embraces regulations designed to promote public convenience or the general prosperity or welfare, as well as those specifically intended to promote the public safety or the public health. (Chicago, Burlington & Quincy Railroad Co. *v.* Illinois, 200 U. S. 561, 592.) In one of the latest utterances of this court upon the subject it was said: 'Whether it is a valid exercise of the police power is the question in the case, and that power we have defined, as far as it is capable of being defined, by general words a number of times. It is not susceptible of circumstantial precision. It extends, we have said, not only to regulations which promote the public health, morals, and safety but to those which promote the public convenience of the general prosperity.' . . .

And, further, 'It is the most essential of powers, at times the most insistent, and always one of the least limitable of the powers of government.'" (Eubank *v.* Richmond, 226 U. S. 137; Sligh *v.* Kirkwood, 237 U. S., p. 59.)

It is competent for the legislature to exercise all legislative power not forbidden by the Constitution or delegated to the General Government, or prohibited by the Constitution of the United States. (Bushnell *v.* Beloit, 10 Wis. 195.)

Mr. Justice Timlin said: "We must start with the axiom that the legislature has all legislative power not withheld or limited by the constitution of the State or the exercise of which is not prohibited by the Federal Constitution." (Nitka *v.* W. U. Tel. Co., 149 Wis. 110.)

The police power of a State is as broad and as plenary as the taxing power. (Bittenhaus *v.* Johnston, 92 Wis. 588.)

The police power is a broad and comprehensive power, by which the rights of an individual, both as to his liberty and his enjoyment of property, may be curtailed in the interest of the public welfare, but it is not easy of accurate definition. (Huber *v.* Merkel, 117 Wis. p. 366.)

As was said by Mr. Justice Dodge: "By a long line of decisions and consensus therein by the people of the various States, it has become settled that thereby all powers of a legislative character ordinarily enjoyed by sovereign governments became vested in the State legislature, except so far as restrained expressly or by substantially necessary implication elsewhere in the constitution." (State ex rel. Zillner *v.* Kreutsberg, 114 Wis. p. 532.)

III

History of Legislation Relating to Filled Milk

We submit a history of legislation relating to filled milk. It has been held that where the objection to the constitutionality of a statute turns on the question as to its reasonableness under the police power, such history may be very persuasive. Certainly on the question of whether it is a debatable subject, it is pertinent to know that the matter has been generally debated. (Adams *v.* Milwaukee, 144 Wis. 371; Purity Extract Co. *v.* Lynch, 226 U. S. p. 204; Muller *v.* Oregon, 208 U. S. 412.)

As was said in the latter case: "When a question of fact is debated and debatable and the extent to which a special constitutional limitation goes is affected by the truth in

respect to that fact, a widespread and long continued belief concerning it is worthy of consideration."

It was said by Mr. Justice Holmes, in Noble State Bank *v.* Haskell, 219 U. S. 104, speaking of the police power of a State: "It may be put forth in aid of what is sanctioned by usage or held by the prevailing morality or strong and preponderant opinion to be greatly and immediately necessary to the public welfare." And it has been well said, what we know as men we can not ignore as judges; that is, we will consider matters of common knowledge without proof.

The laws prohibiting filled milk now in force are of three general types:

1. Laws which directly prohibit the manufacture and sale of filled milk. Of this type are the laws of New Jersey, New York, and Wisconsin.

2. Laws which prescribe standards for condensed or evaporated milk which have the effect of prohibiting the manufacture and sale of filled milk. Of this type are the laws of Colorado, Connecticut, Florida, Maryland, and Ohio.

3. Laws which permit filled milk to be sold as "imitation milk" under restriction to prevent fraud. These restrictions are so severe as to be practically prohibitive. These are the laws of California, Oregon, and Utah.

The Bureau of Animal Industry of the United States Department of Agriculture, in a bulletin on "Legal standards for dairy products," issued in 1919 as a typewritten bulletin, lists 31 States as having standards for condensed or evaporated milk, which were adopted either by an act of the legislature or by some administrative body under legislative authority, which prescribe the percentage of solids and butter fats. These States are Arizona, California, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Hampshire, New York, North Carolina, North Dakota, Ohio, Oregon, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming. In addition to the States listed in this bulletin, Connecticut and Florida have laws prescribing standards for condensed milk.

Congress has before it a prohibitory bill which has passed the House 250 to 40.

History of Bill in Our Legislature

The legislative records show that the bill was thoroughly considered before committees of each house; that substitute amendments were offered for regulation in each house, which were defeated by large majorities; that the bill came up in each house by special order, which denotes special consideration.

The bill was passed in the assembly by a vote of 67 to 10, and in the senate by a vote of 28 to 0.

The bill was signed by the governor, who himself is a lawyer and has been attorney general of the State. The legislative members and the governor are bound by the same oath to support the constitution as are the members of this court. Their well-considered action should have great weight according to judicial authority.

It will be seen that the compounds have been considered inimical to the public welfare by a large portion of the people of this country. We must conclude that there must have been some reasonable basis to induce legislation of this kind by so many different bodies.

IV

We now come to a recognized judicial authority on the subject, which finally settles the question so far as the Federal Constitution is concerned.

The Hebe Co. shipped some of its product manufactured in Wisconsin into Ohio for sale in that State. The sale being forbidden in that State by statute, the question of the validity of the statute was raised in the United States District Court for Ohio, and passed upon by three judges sitting at the trial. The statute was upheld. The Hebe Co. then took the case to the United States Supreme Court, and there the statute was again upheld. In the United States Supreme Court the contention was made, as here, that the statute was in contravention to the fourteenth amendment. As there is no corresponding provision in our State constitution that goes so far to sustain the rights of property as the fourteenth amendment of the Federal Constitution, that decision is decisive of the case here if it is followed. While this court has the right to differ from the Supreme Court of the United States on this question, it will not do so on the construction of the Federal Constitution. Of the 12 Federal judges passing on the subject, 3 supreme

judges dissented, but not upon the validity of the statute but on its construction as to whether it applied to the case before them.

The United States Supreme Court, in Hebe Co. v. Shaw, 248 U. S. p. 303, said:

"The purposes to secure a certain minimum of nutritive elements and to prevent fraud may be carried out in this way, even though condensed skimmed milk and Hebe both should be admitted to be wholesome. The power of the legislature is not to be denied simply because some innocent articles or transactions may be found within the prescribed class. The inquiry must be whether, considering the end in view, the statute passes the bounds of reason and assumes the character of a merely arbitrary fiat' (Purity Extract & Tonic Co. v. Lynch, 226 U. S. p. 204). If the character or effect of the article as intended to be used 'be debatable, the legislature is entitled to its own judgment, and that judgment is not to be superseded by the verdict of a jury,' or, we may add, by the personal opinion of judges, 'upon the issue which the legislature has decided' (Price v. Illinois, 238 U. S. p. 452; Rast v. Van Deman & L. Co., 240 U. S. 342). The answer to the inquiry is that the provisions are of a kind familiar to legislation and often sustained, and that it is impossible for this court to say that they might not be believed to be necessary in order to accomplish the desired ends."

As was said by Mr. Justice Dodge:

"The reasons for a given statute are for the legislature if there are any which can fairly have weight. They are not for the courts. The latter have no control over the validity of a law unless they can say with substantial certainty that [fol. 604] no argument or consideration of public policy exists which could have weight with any reasonable and honest man. If any such argument or reason can be suggested its weight or sufficiency is not debatable in the courts. The existence of legitimate and adequate reasons for any law should not lightly be denied. Human minds differ, and what may seem inadequate or irrelevant to one may seem cogent to another. One is not justified, therefore, in assuming that all who differ from him are unreasonable or are not acting in good faith. It is from such considerations as these that the courts have laid down for themselves the rule

that only in a clear case—clear beyond reasonable doubt will they venture to assert that a law is without reason to support either its purpose or the classifications it may make." (The State Ex rel. Kellogg *v.* Currens and Others, 111 Wis. p. 439.)

V

The findings of the referee are not conclusive on the court. They may be considered only to refresh the memory of the court as to matters of which the court will consider as common knowledge and of which it takes judicial notice, or for the purpose of bringing to the attention of the court scientific facts which would otherwise devolve upon the court undue labor.

If there is any reasonable basis upon which the legislation may constitutionally rest, the court must assume that the legislature had such fact in mind and passed the act pursuant thereto. The court can not try the legislature and reverse its decision as to the facts. All facts necessary to sustain the act must be taken as conclusively found by the legislature, if any such facts may be reasonably conceived in the mind of the court. (6 R. C. L., secs. 101 to 116, inclusive, and cases there cited.)

The compounds manufactured and sold by the plaintiffs and other companies are in exact imitation of the genuine evaporated milk. They are produced and sold by the manufacturer cheaper than the genuine. They are not of equal food value as the genuine. They may be sold, however, and are susceptible of being sold to the public for the genuine at the same price. They are therefore capable of being used for fraudulent purposes and to deceive purchasers. The temptation of retail dealers is to sell the cheaper article in place of the more expensive article to increase their profits. If used as a substitute for milk, the public health may be impaired, not because the compounds are in themselves deleterious, but because they lack in certain food elements essential to a well-balanced dietary. It was competent, therefore, for the legislature to find that the manufacture and sale of the compounds in question were conducive to fraud and deception and likely to be injurious to the public health. Having so found, as we must conclude it did, it is not for this court to set its judgment against that of the legislature.

VI

By reference to the Federal census of 1920, we find that Wisconsin ranks first among all the States of the Union in total value of dairy products from its farms. It had 2,762,488 dairy cattle in that year, an average of more than 10 to the farm. It held first rank in milk production, producing 5,425,258,321 gallons, valued at over $230,000,000. It produced more cheese than any other State, the value of which amounted to $91,462,878. It ranked second in amount of butter produced. It ranked first in the manufacture of condensed milk. It ranked second in milk powders produced. In 1920, 64.9 per cent of the Nation's cheese was produced in this State, and 26.6 per cent of her condensed milk, 24 per cent of her milk powders, and 11.4 per cent of the Nation's butter were produced here. Nor is this all. The great dairy industry of this State is reflected in the high average production of agriculture crops of many varieties. The fertilizers from the dairy industry enrich the soil so that of the north central States, Wisconsin was first in the value average yield per acre in wheat and potatoes, second in barley and hay, and third in corn, oats, and rye.

The reputation of Wisconsin for the purity and excellence of her dairy products stands high in the markets of the country, and the prices she obtains therefor are equally well sustained.

The constitution of our State was ordained, among other things, to promote the general welfare. Thus it might well be that the legislation in issue could be upheld to protect the reputation of the State for its dairy products in the markets of the country from adulteration and misleading representations. The advertisements of coconut oil compounds have been skillfully prepared to give the impression that the compounds are equal, if not better, than the genuine dairy product. For instance, a full-page advertisement in the Chicago Tribune contains a typical gem of the advertiser's art:

"Nutro is a delicious and nutritious new milk product. It is prepared in the rich dairying districts of Wisconsin and Indiana and made of pure, fresh cow's milk with the animal fats extracted and essential food values replaced by a refined, rich, sweet, purely vegetable cocoanut fat.

"Nutro is pure, delicious, wholesome. It is prepared in modern condensories from pure cow's milk evaporated to

double strength, with the animal fats extracted and then enriched with sweet, edible, highly refined cocoanut fat."

Comment is unnecessary, other than to say that other advertisements are equally well calculated to convey the idea to the public that pure, fresh cow's milk from Wisconsin has been enriched and improved by the injection of sweet, edible, highly refined cocoanut fat.

The State is not without power to protect its industries in its markets in this and other States, according to a decision of the Supreme Court of the United States upholding a statute of Florida designed to protect its fruit trade. We quote from Sligh *v.* Kirkwood (237 U. S. p. 61):

"We may take judicial notice of the fact that the raising of citrus fruits is one of the great industries of the State of Florida. It was competent for the legislature to find that it was essential for the success of that industry that its reputation be preserved in other States wherein such fruits find their most extensive market. The shipment of fruits so immature as to be unfit for consumation, and consequently injurious to the health of the purchaser, would not be otherwise than a serious injury to the local trade, and would certainly affect the successful conduct of such business within the State. The protection of the State's reputation in foreign markets, with the consequent beneficial effect upon a great home industry, may have been within the legislative intent, and it certainly could not be said that this legislation has no reasonable relation to the accomplishment of that purpose."

Nothing will destroy the reputation of the State in this industry more completely than to allow the manufacture of a cheap and inferior article to be advertised and sold in the markets of the world as and for the genuine article made in Wisconsin.

The principle of allowing these compounds to be manufactured and sold, followed to its logical conclusion, will lead from "filled" milk to "filled" butter, from "filled" butter to "filled" cheese, and finally we may have the "synthetic" cow taking the place of the domestic animal of the farm. Vegetable fats, cheap, but lacking in essential elements of vigorous life, will take the place of butterfats of demonstrable higher food value. A great industry of

a great State will decline, a victim of "national advertising" of cheap and deceptive substitutes.

It follows that the act challenged by this action is constitutional and within the police power of the legislature.

By the Court: The action is dismissed.

The issues of fact were exhaustively presented to the referee, Hon. A. G. Zimmerman, who made and presented to the court able and comprehensive findings of fact. His claim for services and disbursements are allowed.

Costs will be taxed against the plaintiffs as follows:

Services referee, 20 days, at $25 per day	$400
Services reporter, 12 days, at $10 per day	120
Transcribing 4,790 folios, at 10 cents.	
Clerk's fees.	
No other costs to be taxed.	

ROSENBERRY, J., concurring: I concur in the judgment in this case. Because I am not prepared to assent to the far-reaching intimation in the opinion that the dairy interest, because of its magnitude and commercial importance may be entitled for that reason to special consideration and protection, I feel it my duty to state the grounds upon which my conclusion rests.

Chapter 449 of the Laws of Wisconsin is an exercise of the police power by the legislature. The act is valid unless it clearly contravenes some provisions of the State or Federal constitution. The specific ground upon which it is alleged to be invalid is that it has no relation to the public health or to the prevention of fraud and deceit. Primarily the determination of whether or not the public health may be injuriously affected or whether the public may be defrauded or deceived by the manufacture and sale of an article is for the legislature. Its determination in that regard is not to be reviewed by this court as an ordinary finding of fact. It is the duty of the court to sustain the law unless it clearly appears to be arbitrary and unreasonable or passed for some ulterior purpose and not in the interest of the general welfare or to have no relation in fact to the purported legislative purpose.

If the situation is such that a fairly debatable question is presented, one upon which reasonable men may fairly differ within established legal rules; then it is for the legis- [fol. 605] lature and the court should not interfere, even

if, in its opinion, the conclusion of the legislature is an erroneous one. The facts and circumstances stated in the opinion show that the situation which confronted the legislature of this State is one with which several legislatures have been called upon to deal and their determination has been that a situation does exist which requires the exercise of legislative power in order to protect the public health and prevent fraud and deception. That some have dealt with it in one way and some in another merely indicates a varying judgment as to what is necessary to advance the public welfare. This is not conclusive but persuasive. In the face of the fact that the legislature of this State and the legislatures of other states have arrived at the same conclusion and giving effect to the presumption stated in the opinion, it can not, in my judgment, be said that the matter is so clear as not to be debatable. Therefore, the matter was for the legislature and its action is conclusive.

The referee found "that the compound Hebe is not harmful or deleterious as a food for human consumption either for adults or children; but that Hebe, though not in itself harmful, is not a desirable or proper food for use as a beverage for infants or as a complete substitute for milk, because of its lower vitamine A content.

"That the compound Hebe is a wholesome food product for human consumption in the sense, for instance, that bread, potatoes or lean meats, or cereals, or fruits, are wholesome foods, each for their various uses and purposes; and that the use and purpose of Hebe as a food is especially in cooking and baking for its additional or substitutional protein, calorie and shortening values."

It is urged that this finding is conclusive upon the court; that there was under the facts in this case no legitimate ground of interference by the legislature. The argument thus advanced gives to the finding of the referee a weight and efficiency which it does not possess.

The validity of an act of the legislature can not be made to depend upon a finding of fact by a court or the verdict of a jury in a particular case. (State *v.* Layton, 160 Mo. 474; 62 L. R. A. 163; St. Louis *v.* Liessing, 1 L. R. A. (N. S.) 918).

If the protection of the public health requires that the sale of adulterated milk shall be prohibited, it is in the power of the legislature to do so even though there may be

some articles in the prohibited class which are in and of themselves harmless. (Hebe Co. *v.* Shaw, 248 U. S. 297; Purity Extract & Tonic Co. *v.* Lynch, 226 U. S. 192.)

It is for the legislature to say whether the sale of the adulterated article shall be prohibited or shall be regulated, and having spoken, the court may not substitute its judgment for that of the legislature, for in doing so the court would exercise legislative rather than judicial power, the matter being one which is within the legislative field.

The decision in Hebe *v.* Shaw is to my mind conclusive of the only doubtful question presented here, and that is whether or not the manufacture and sale of an article in and of itself wholesome and not unhealthful, may be prohibited for the reason that it falls within a class of articles the sale and manufacture of which as a whole may be detrimental to the public health and may be made the basis of fraud and deception and may therefore be prohibited.

In my judgment, the question presented in Sligh *v.* Kirkwood (237 U. S. 52) is not presented by the record in this case. The proposition there decided is not necessary to a decision of this case. There seems to me to be a clear distinction between that case and this. The article dealt with in that case was one admittedly unfit for use as food. Chapter 409 deals with an article which is wholesome but has less food value than the article for which it may be sold as a substitute. This phase of the case has not been fully argued here and I prefer to rest my conclusion upon the grounds stated.

Mr. Holman: The charge which was made by the attorney for the opposition that there was some sort of a conspiracy, and which, the way it was made, we took to involve the good name and reputation of the National Milk Producers' Federation, moved us on yesterday to call for any further proof of any such charge. I wish to emphasize at this time that no proof has been adduced. I now wish to tell this committee what I know about the origin of the Voigt bill.

The first time that any proposed Federal legislation in regard to filled milk came to my attention was early last year at a meeting in which the National Board of Farm Organizations had gone over to the Interstate Commerce Commission on a matter affecting freight rates. Present with our delegates were a number of Senators and Con-

gressmen, including Congressman Edward Voigt. There was also present a gentleman by the name of E. C. Pommerening, who now occupies the post of president of the Wisconsin Society of Equity. I happened to be sitting next to Congressman Voigt and it was the first time that I had ever met this estimable gentleman, and on the other side of him was Mr. Pommerening. Mr. Voigt stated to Mr. Pommerening at that time that he was considering the introduction of a bill of a Federal character. Mr. Pommerening urged him to introduce it. I have just been advised that my office is sending up here a telegram which was received two days ago from Mr. Pommerening and became lost in the files, which I would like to read to the committee when it comes.

(The telegram, later presented to the committee, reads as follows:)

Madison, Wis., August 1, 1922.

CHARLES W. HOLMAN,
Washington, D. C.

When present meeting national board Washington, after filled milk fight in Wisconsin, believing it to be necessary to have national measure I asked Voigt as member Agriculture Committee of House from our State to introduce a measure that would prohibit interstate transportation of filled milk. This was absolutely the first information of request that Voigt had and acted upon this request.

E. C. Pommerening.

Mr. Holman: I also have a telegram from Congressman Voigt which I will file for the record, dated Sheboygan, Wis., August 3, 1922, 8.40 p. m.

CHARLES W. HOLMAN,
Washington, D. C.

The Voigt bill was not introduced as the result of any trade war between Hebe and Borden or anyone else. I introduced the bill after the evils involved in filled milk manufacture and sale were brought to my attention by the president of the Wisconsin Equity Society, an organization of farmers, and after getting considerable information from John D. Miller, of the New York Milk Producers Federation, and others. No one representing Borden's or any

other producer of evaporated or condensed milk ever approached me to urge introduction bill. Bill was introduced by me for purpose of protecting producers and consumers, and this talk about trade war is all affer that on the part of Hebe people. I sincerely believe the Borden people are actuated by the highest motives in opposing filled milk and only wish to protect purity of their and other products.—

Edward Voigt, M. C.

I never met Mr. Bryan until he came to this hearing; that is, the hearings of June 30.

Senators, the National Milk Producers' Federation is composed of more than a score of organizations that market their milk. They have had for years continuous battles with the dealers who buy their milk. There have been times when these battles have resulted in so-called milk wars or farmers' strikes. Our associations have particularly at times had to fight Bordens and Sheffields and others because of a different belief as to what was a just price for milk. That peculiar condition has made it necessary for every officer of our associations and our federation to be very guarded in any dealings they have with any dealer or manufacturer. As a result of that policy, we never have any conferences with any man who buys our milk unless there is at least a witness with us. I have never met Mr. Engels except in the company of one or two others of our own people. We, under no circumstances, would permit ourselves in the present state of the farmers' cooperative organizations to build themselves up, with all of the forces fighting to break them up, a fight which resulted in our final passing of the Capper-Volstead Act, and on which we are trying to build a sound, economic structure of marketing in this country.

That explains our relation to the dealers. We honor them as business men.

Mr. Balderston: And manufacturers.

Mr. Holman: And manufacturers, also. We have no quarrel with them, but when it comes to selling milk to them that is so much a matter of contention that we feel that it is best to protect ourselves, and that is the situation with regard to any relations that we have ever had with Bordens. I trust that my explanation has cleared any doubts, if they existed, but I could not close without expressing my personal gratification that there are manufacturers of evap-

orated and condensed milk in this country who are not willing to put themselves on record as being enemies to the dairy farmers by bringing in a coolie-produced vegetable oil to substitute for American produced dairy products and sell them to the consumers.

Senator Ladd: Is there any other witness to be heard this morning?

Mr. McKee: You don't want the inference left on the record, do you, that the Carnation Co. had made any attempt to interfere with or break up the organized farmers selling milk to them?

Mr. Holman: I had no reference to any particular dealer when I spoke of the differences of opinion that exist between the 15th and the 25th of each month as to the question of price, and there is nothing personal in my remarks at all. I have the greatest friendliness for these gentlemen. I think they are misguided.

Mr. McKee: If I may be permitted, I have a few of these exhibits here that I would like to show the committee. Here is the Eagle brand of sweetened milk, a whole milk; and this is the Square brand, which is sweetened skim milk, [fol. 606] and I call the attention of the committee to the close appearance of the two products. This is a can of sterilized evaporated skim milk.

Mr. Jackman: When you say "this," Mr. McKee, it does not mean anything in the record.

Mr. McKee: This can of Laurel brand. I call the committee's attention to the close resemblance of this can of Laurel brand of sterilized skim milk to the sample of Carnation brand whole sterilized milk and the sample of Hebe compound. The Square brand of sweetened skim milk and the brand of Laurel evaporated skim milk are not included within the prohibition of the proposed bill. The Eagle brand of whole sweetened milk also does not come within the prohibition of the Voigt bill.

Senator Ladd: If there is no further matter to come up this morning, we will stand adjourned until 10.30 on Monday morning.

Mr. Jackman: There was some suggestion made here the other day, Mr. Holman, pardon me, that you had an amendment that you desired to offer. May I see a copy of that amendment?

Mr. Holman: Just what amendment are you referring to?

Mr. Jackman: I don't know. You made the statement that you proposed to offer an amendment, my recollection is, with reference to some S. M. A. or something here.

Mr. Holman: I never made any such statement.

Mr. Jackman: I beg your pardon. You did in the opening statement here, when we first started.

Mr. Holman: I think you refer to an amendment that Mr. Revis referred to in his statement.

Mr. Jackman: Who is Mr. Revis?

Mr. Holman: He is the representative of the S. M. A. people, who testified before the committee.

Mr. Jackman: No. I didn't hear him. That is since we have been here this week. You made a statement; I am very positive about it. You haven't any amendment that you propose to offer, then, or copy of anyone else's amendment?

Mr. Holman: Mr. Revis brought up the matter of the fact that the S. M. A. is a vitamine product. We are not fighting any compound that has a constructive character, and we consented, as far as we are concerned, to the drafting of an amendment.

Mr. Jackman: Have you a copy of the amendment? That is all I want to know.

Mr. Holman: I don't believe I have a copy with me today, but Senator McKinley has a copy of the amendment and will be glad to furnish it to you.

Mr. Balderston: I don't think we have it here.

Mr. Holman: We made no objection to that amendment.

Mr. Balderston: The amendment was at Mr. Revis's suggestion. I think it was Mr. Bryan that made that statement, if I remember it.

Mr. Jackman: No; Mr. Holman. I made a memorandum of it.

Senator Ladd: Well, is there anything further?

Mr. Holman: I want to put in the record that we are not pressing this particular amendment. We only are agreeing to it.

Senator Ladd: If there is nothing further, we will stand adjourned, then, until Monday morning at 10.30.

(At 12 o'clock noon the hearing was adjourned to 10.30 o'clock a. m., Monday, August 7, 1922.)

FILLED MILK

Monday, August 7, 1922

United States Senate,
Subcommittee of the Committee on Agriculture
and Forestry,
Washington, D. C.

The subcommittee met, pursuant to adjournment, at 10.30 o'clock a. m., in room 224, Senate Office Building, Senator William B. McKinley presiding.

Present: Senators McKinley, Ladd, and Kendrick.

Senator McKinley: The committee will come to order.

Senator Ladd: Doctor Goldberger, of the Public Health Service, is here this morning to tell us what he might know about filled milk, particularly in regard to fats and vitamines, or anything that he cares to tell us.

Senator McKinley: Would it not be well for you to ask him some questions, to direct his attention to the bill we have before us, unless he has kept in touch with it?

Statement of Dr. Joseph Goldberger, Medical Officer, United States Public Health Service, Washington, D. C.

Senator Ladd: Give your name, address, and position.

Doctor Goldberger: My name is Joseph Goldberger, and I am a medical officer in the United States Public Health Service, in charge of pellagra investigations.

Senator Ladd: Doctor, tell us in your own way what you may care to say on this question. You know what the general purpose is, I assume?

Doctor Goldberger: I tried to inform myself as well as I could by reading this bill that this committee is considering, and it seems there are one or two things about it that perhaps it might be proper for me to express an opinion about. One of those is the word "deleterious," qualifying an article of food, subsection C of section 1.

In my judgment that would not be a correct use of the word deleterious. From what little I know about such food I would say that such food is a wholesome and nutritious article of food and that in the usual conventional use of the word deleterious that would not be a proper qualification of it.

Senator McKinley: In other words, you would think the word should be eliminated from the bill?

Doctor Goldberger: Well, I should say that it was not a deleterious article of food and that it is not a proper qualification of such a food to say that it is deleterious.

Whether it is adulterated, again would depend upon your definition of adulteration, since, as I understand it, one of the examples of this sort of food on the market shows by its label exactly what it contains. It would, again, under the usual conventional use of English, fail to be an adulterated article of food. It states exactly what it contains, and to the best of my knowledge and belief states so frankly and honestly. So that this article of food that this bill proposes to abolish the sale and manufacture of and shipment of in interstate commerce, is not an adulterated and is not a deleterious article of food, as I understand it.

Senator Ladd: To bring out a few points that we particularly want information on, Doctor——

Doctor Goldberger: Yes; I would be very glad to answer your questions.

Senator Ladd: Do you consider, for infant feeding and children feeding, a filled milk—that is, skimmed milk with vegetable fat replacing the butter fat—a suitable food for the feeding of infants and young children?

Doctor Goldberger: Taking your question in a broad general sense and attempting to answer it in that way and giving a broad general answer, I should say no, for these reasons:

A preparation of this sort is, as I have already stated, a wholesome and nutritious article of food but it has its place in the dietary. It has its limitations, and it must of necessity be used within those limitations. I might illustrate that in this way, that white bread is, in my judgment, a wholesome and nutritious article of food, yet it [fol. 607] certainly has decided limitations as an article of food but has a place in the dietary which must be recognized, and it must be kept in its place. It can not fulfill all possible conceivable purposes of the dietary.

So, in the same way, with this preparation, while it is wholesome and nutritious and not in any general proper sense deleterious, it has its place and can not take the place of other foods because of the restrictions and limitations that it has.

Does that answer your question?

Senator Ladd: Well, in part. Now for what reason? Can you give any reason why for nutritive purposes with infants and children this filled milk is not as satisfactory as the natural milk?

Doctor Goldberger: The reason, or probably the principal reason, why it would not serve exactly the same purpose as natural milk is that the first step of preparation of skimmed milk in removing the butter removes a certain food essential, named a vitamine, vitamine A, and the addition of the vegetable fat does not replace this element, although it replaces the fat and the caloric value; and, secondly, food so constituted is, by comparison with an equivalent amount of milk, poorer in this dietary essential of vitamine A, and it is a dietary essential that is quite important; particularly important in young children and infants whose diet is naturally a restricted one and is likely to be restricted entirely to milk, and in such instances it would be necessary to add some other source of this vitamine in order to make the diet of a child complete. Without this other addition the nutrition of the child would be likely to suffer.

Senator Ladd: The next point I wanted to get out was as to whether in your judgment the nutritional value in children feeding of milk fat was any different than that of the vegetable fats. You say their calories would be approximately the same, but does one of those serve any different purpose than the other?

Doctor Goldberger: Nutritionally and metabolically I am not aware that it would serve any different purpose, one compared with the other, except in so far as I have already stated, that one is without, or practically without, any vitamine and the other contains it in quite considerable amounts, is quite rich in vitamine A.

There have been opinions expressed, I think, that butter fat, as a butter fat, is more easily digestible than a vegetable fat, but I am not satisfied that the basis for that judgment is entirely convincing at all. That is, it is a debatable opinion, in my judgment.

Senator Ladd: I had a telegram from Doctor Geis of Columbia University. He was unable to be here this morning on account of important work that he was carrying on for the Carnegie Institute and which he could not leave.

Doctor Goldberger: Yes, sir.

Senator Ladd: And in this telegram he states:

"Filled milk lacks some of the essential nutritive qualities of natural milk. There is a biological function of butter fat which can not be supplied by any vegetable fat in combination with skimmed milks. Children that may be fed largely on filled milk would be deprived of some of the essential nutrients to such a degree that their growth and development and their health would be seriously impaired. For this reason alone the sale of filled milk should either be prohibited or so regulated that such fake milk would not be used where its consumption would do the serious harm referred to above."

I would like you to discuss that.

(The telegram referred to is dated "New York, July 31, 1922," addressed to Hon. Edwin F. Ladd, Senate Office Building, Washington, D. C., and signed by "William J. Gies, executive officer, Department of Biological Chemistry, Columbia University.")

Doctor Goldberger: It seems to me that expresses the fundamental points embraced in what I have already stated, that it is poor in vitamine A and for that reason such preparation would not be the equivalent of whole milk in nutrition, but to explain that further, if a source of vitamine A were added to it, so far as it is at present known, such milk would become equivalent in nutrition to an equivalent amount of whole milk. I am speaking now purely of the nutritive health aspect of it. I am not discussing now the matter of public policy as to whether such a thing should or should not be done. I assume I am not here for that purpose. I may have my own personal opinions about that.

Senator Ladd: What we want is your opinion.

Senator McKinley: Doctor, if orange juice were added to the filled milk in feeding the baby, would that make up for the deficiency in vitamine A.

Doctor Goldberger: Not entirely, because orange juice is not especially rich in that vitamine, although it is rich in some of the others, for instance, the antiscurvy vitamine. But if tomato juice is added, as is done now in children feeding, that would contribute very materially to supplying that. But one might say this, that there is no

particular necessity for using this preparation in infant feeding, and I am not aware that it is being urged for infant feeding any more than one might say white bread is urged exclusively in infant feeding. It has its place.

One might object to white bread on an analogous ground for use in human nutrition, because it is not a complete food, and if any or all of us were to restrict ourselves too largely to white bread we would eventually suffer in our health and possibly finally became paralyzed by the disease known as beriberi. We all of us probably eat white bread to a large extent. We do not suffer from it because there are other sources which supply this nutritive essential in adequate amount and our health is taken care of.

My judgment would be it is going to an unnecessary length to exclude or prohibit the individual from using, I think admittedly by all who will consider just its limitations, a perfectly nutritious and wholesome article of food, which can be supplemented in these other ways.

I do not know that I have quite answered your question or not.

Senator Ladd: Those are all the questions I have. I just wanted to get your views on those subjects.

Senator McKinley: You can put this letter in the record.

(The letter referred to is as follows:)

University of Illinois,
College of Agriculture,
Urbana, Ill., July 29, 1922.

Senator W. B. McKinley,
Senate Office Building, Washington, D. C.

Dear Sir: I thank you for your invitation to attend the hearing on the filled milk bill before the Agricultural Committee of the Senate August 1, and regret that I will be unable to do so.

I sincerely hope, however, after a careful study of the bill from the standpoint of nutrition that your committee will not see fit to recommend its passage. "Filled milk" as defined in article C of the bill, can not with any regard to facts, be described as a "deleterious article of food," nor, if properly labeled, does it constitute "a fraud upon the public." Nor can it be said, with any degree of certainty, that a compound of skim milk and vegetable fat is

a dangerous food for infants, even when fed alone for several months continuously.

Whatever the purpose of the framers of this bill may be, it is very evidently parading under false colors in professing to protect the public health and to guard the public against fraud. Imitation milk, when sold as such is no more of a fraud than imitation butter, or imitation egg powder, or a large number of other imitations.

In prohibiting a certain type of competition against genuine dairy products, it actually subsidizes the dairy industry. Its purpose in so doing should be frankly stated, and the merit of the bill judged from this angle only. Personally I feel that dairy products have such a high food value that they can be marketed successfully on their merits, without the aid of legislation, or of the somewhat maudlin sentiment that is often used in propagandizing the public.

Very truly yours, H. H. Mitchell, Associate Professor of Animal Nutrition.

Senator McKinley: Of course some of us feel that the dairy industry should be protected, and that the sale of filled milk might be disadvantageous to the dairy industry. Perhaps that is out of your line.

Doctor Goldberger: Well, I am afraid I am not specially informed on the dairy industry as such. I think perhaps there are others much better informed on that, although I might add that, I am not particularly convinced that that is a valid argument, because whether you use whole milk or whether you use skimmed milk the original supply must be maintained to provide one or the other, or the combination of the two, so that the producer will still be, I take it, called upon to produce and possibly and probably to a greater extent than before by the extension of the use of this article of food, in itself a very valuable and important article of food.

Senator McKinley: Just one more question I would ask. You are rather the closing witness. As a public-health officer would you feel that it was proper to continue the sale of filled milk to the public?

Doctor Goldberger: Yes, sir: I would.

I would like, if I may, to make a remark or two that perhaps has only incidentally a relation to this. I have for several years, in my official capacity, been very much inter-

ested in the disease known as pellagra, which is quite pre- [fol. 608] valent, particularly in our Southern States, but is not entirely absent from other parts of the country. In fact, there is probably more of it in the other parts of our country than is realized.

Our studies have indicated quite clearly that the essential defects in the diet that is responsible for the prevalence of this disease is a defect in the protein element of the diet. Now, we have been trying for several years in connection with those studies, to improve by explaining and giving out this information—to improve the protein factor in the diet of the people most particularly affected, and one of the things that have been emphasized has been the increased use of milk. That great single article of food we would like to see used in larger amounts and more extensively by a larger number of families and individuals.

There are many, many families and many individuals, thousands and perhaps millions, who do not use any or very little milk. Now, it seems to me that if we could make accessible and available to them a cheap article of food which contains this element we would go a considerable way toward improving the nutrition of that part of our people, and to that degree blotting out this very serious nutritional disease in our country. And I would have no objection, in fact, I would decidedly favor as one means of attaining that object, the extensive use of this food in the household in making pastries and in making bread.

Senator McKinley: You mean this filled milk?

Doctor Goldberger: This filled milk, for the reason it would provide for this large element of the population a very important and essential element in the diet, my object being to get it there and preferably to get it there as cheaply as possible.

If we succeeded in that I think we would help to boost the milk producing industry, and that is one of our very earnest objects.

Senator Ladd: Have you any questions?

Mr. Holman: May I ask a question?

Senator McKinley: Certainly.

Mr. Holman: Doctor, if two cans of products were on the shelves, one filled milk and the other evaporated milk, and both could be bought for the same price, approxi

mately the same price, say a difference of a half a cent a can, or, say exactly the same price, would you advise the use of the filled milk in preference to the whole evaporated milk for cooking and baking?

Doctor Goldberger: Why, no; I think probably if I were advising in such a matter, or if I were doing it myself, I think I would probably prefer to use the whole milk.

Mr. Holman: That is all.

Doctor Goldberger: But I would like to retain the privilege of buying the other if I wanted to.

Mr. Jackman: Let me ask a question out of mere curiosity, if you please.

Are you the Doctor Goldberger who has conducted various investigations with reference to pellagra?

Doctor Goldberger: Yes, sir.

Mr. Jackman: Thank you.

Senator McKinley: Mr. Bryan, have you any questions?

Mr. Bryan: I think not.

Mr. Jackman: There were some statements made the other day with reference to the prices, and I think there has been some misconception about the prices at which the compound and evaporated milk have been sold in Washington. I do not know where the mistake is, or where the difficulty is, but I asked Mrs. Ohm, here in the city, and not connected with us, to get these prices, and I would like to have her put in the record the prices at which on Friday and Saturday she bought these products in the city of Washington. Is there any objection?

Statement of Mrs. Myrtle Ohm.

Mr. Jackman: Will you give to the reporter here your name and address and tell us the prices at which you bought these various brands and where you bought them and when.

Senator McKinley: Have you a list of them?

Mrs. Ohm: Yes; I have a list.

Mr. Jackman: You have the original receipts, have you not?

Mrs. Ohm: Yes, sir.

My name is Myrtle Ohm, 205 Tenth Street SW., Washington, D. C.

Mr. Jackman: These purchases were made Friday and Saturday of last week at our request?

Mrs. Ohm: They were. Lenkin's Reliable Market, corner of Third and C Street NE., 1 Hebe, 8 cents; 1 Carnation, 10 cents.

Hornstein's, 2119 Eighteenth Street NW., 1 Pet, 10 cents; 1 Borden's milk, 10 cents; 1 Hebe, 8 cents.

Everybody's Market, 1824 Eighteenth Street, 1 Carnation, 13 cents; 1 Hebe, 9 cents. Freeman Brothers' Market, at 3608 Fourteenth Street NW., 1 Borden's, 10 cents; 1 Hebe, 8 cents.

Old Dutch Market, Sixth and Pennsylvania Avenue, 1 Challenge, 15 cents; 1 Carnation, 10 cents; 1 Hebe, 8 cents; 1 Van Camp's, 10 cents.

Philip Lustine, 623 Seventh Street, SW., 1 Hebe, 10 cents; 1 Carnation, 12 cents; 1 Pet, 12 cents.

I guess I gave you the C and Third Streets one—1 Carnation, 10 cents; 1 Hebe, 8 cents; Third and C NE.

Florida Avenue and Fourteenth Street, 1 can of Borden's, 13 cents; also have Carnation at the same price.

Four-and-a-half Street SW., No. 200, 1 can of Eagle, 22 cents.

Mr. Jackman: Those cover various portions of the city?

Mrs. Ohm: Yes, sir.

Mr. Jackman: Both the high class and the cheaper places?

Mrs. Ohm: They do.

Mr. Bryan: Were those all the stores you visited?

Mrs. Ohm: Yes, sir.

Mr. Jackman: Thank you very much. Thank you very much, Mr. Bryan.

Senator McKinley: Are we through, gentlemen?

Senator Ladd: I do not know of anything further.

Mr. Bryan: I want to make a statement, sir.

Statement of Mr. J. Wallace Bryan.

Mr. Bryan: So far as we are concerned, I believe this will be the last statement and the last testimony.

Now, if the committee please, I desire first of all to express appreciation of all on this side of the table, and I think I may include our friends on the other side as well, for the committee's courtesy and attention in the conduct of these hearings. It has been a long and at times somewhat tedious course in mid-summer, and I want to say that

we fully appreciate the opportunity which has been afforded to everybody to say whatever seemed to be necessary to be said from their standpoint in relation to this bill.

I am sure I voice the feelings of everyone when I say that no one can possibly claim that any opportunity has been withheld to present whatever testimony or argument or other consideration it was desired in connection with the bill. So, whatever the outcome of the committee's deliberations is, I am sure it can not be said there was any lack of evidence. They were fully informed as to every phase of this question.

Now, these hearings have taken a wide range, and in their course a great deal of irrelevant matter, I think has been introduced. I desire to refer particularly to the attack which has been persistently and constantly throughout these discussions made on the Borden Co. and certain of the Borden Co.'s products.

I continually and insistently declined to be drawn into any controversy on the subject and I do not propose to be drawn into one now, because our view is—when I say our I refer to the proponents of the bill—that such discussion is entirely irrelevant to the issue which this committee now has to decide.

So far as any interest which the Borden Co. has in the passage of this bill and its activities in connection with it, I shall advert to that in a moment. With reference to the attacks made on its products we feel, as stated, that that is entirely beside the issue at the present stage of the proceedings.

This is not a Borden Co.'s bill. This bill was introduced by entirely independent and extraneous interests. The Borden Co. had no knowledge of its introduction until long after it had been before Congress, so that any attempt to confuse the issue involved in this bill by injecting attacks upon an entirely different product, manufactured and sold under different circumstances, the sale of which is attended by different considerations, it seems to us has no part in the proceedings and the issue which is before the committee, which is as to the policy to be pursued with relation to these specific milk compounds.

In the first place, the evidence on the subject has not by any means covered a small part of the field in relation to either sweetened condensed milk or as to the other prod-

ucts referred to, and even if it should be conceded that there are objections—we do not concede it—if it should be conceded that there are objections either to the labeling or the mode of sale or the mode of advertising of the sweetened condensed milk or of the chocolate malted milk, or any other product of the Borden Co. or of any other company, this is not a fight between the Hebe Co. and the Bor-
[fol. 609] den Co. at all. Those objections do not cure the objections to the sale of the compound. Those objections are not as serious in their implications as the objections which relate to the sale of the compound. Those objections can only be discussed in a hearing devoted to that subject, with testimony introduced for the purpose of adequately covering that subject, and after a full consideration of the special problems and facts which are involved in the other products.

It is clearly impossible, we submit, for the committee to arrive at a just or adequate position in relation to any of these other products, because they were not covered except incidentally and by collateral attacks in this proceeding.

To hold up this bill, if the committee should find it is a desirable bill, because it does not cover other things which might conceivably be in need of regulation, would seem to me to be entirely unjust to the proponents, because the Borden Co. has played a small part in these proceedings, as I shall show in a few moments.

In further relation to the Borden Co. and its products, I do not think it worth while to say this for the record, that the Borden Co. has been in the market 50 or 60 years. The Eagle brand, which has been singled out for attack, is only one of a large number of sweetened condensed milks on the market. It is perhaps the best known and has been subject to scrutiny by dieticians and others ever since is came on the market, and any objections that are to be found to its use will be duly and carefully considered when brought to the company in the proper way.

In regard to the chocolate malted milk, I shall go no further than to say that is sold as a soda-fountain beverage principally. It does contain butter fat. It is not a skimmed milk with coconut flavor, but it contains malted milk, and the milk from which the malted is made contains all its

butter-fat, and there is simply added the skim-milk powder and the flavoring ingredients.

It will be noted the label does not contend that the product contains chocolate. It says it is chocolate flavored.

I may add here that that form of label has been approved by the Federal authorities before it was put on as telling the truth; that cocoa has the flavor of chocolate to most people, and the department felt that describing it as chocolate-flavored malted milk told the truth and removed any objection to the form of the label.

For the rest, the product being intended for use as a beverage, not as an infant food, not as a regular article of diet, but solely as a beverage such as children and adults obtain at soda fountains, clearly a product of that kind is not subject to the objections that have been urged against all milk compounds which are sold, used, and bought differently from the chocolate malted milk.

As I said, these matters are not, as we see, germane to the present controversy, and in their consideration would simply serve to confuse the issue.

I do not hesitate to suggest to the committee that it was the purpose for which the attacks were made; not to assist the committee in its deliberations, but simply to attack this product and make out it was a trade war, which can not be done, and which I shall deal with again in a few moments.

Of the many remarkable features which have characterized this hearing, I am sure that nothing has been more remarkable than that which took place on Tuesday, August 3, when Mr. Urion made his opening statement.

You will recall, Mr. Chairman, Mr. Urion stood there at the end of the table and, with force and fervor, charged that this bill was the result of a conspiracy. Not only that, but that he would produce evidence to show it was the result of a conspiracy; that in the course of this conspiracy false testimony had been introduced. He did not say where, but he said false testimony had been introduced before legislative committees of courts, that documents and records had been purloined, and that the whole motive of this bill was trade war, trade malice, which did not hesitate at the use of illegal and criminal methods, as well as those which are regarded as legitimate in such proceedings.

Now, he did not merely make the charge, Mr. Chairman, but he said, "We expect to show there was a conspiracy."

we expect to show the false testimony." And we waited for eight long days. We have sat here waiting for that testimony, and as the time went on—it was an important charge, if true—we became surprised because why the unessential features of the case should be emphasized at the expense of the more essential ones we could not exactly see, and finally Judge Miller in his statement called attention to the lack of evidence and called upon our friends on the other side there to produce the evidence or to retract the charge. He not only invited, but he challenged them to do it, and very properly said, with all the indignation that a lawyer of the old school of his type might be expected to feel under those circumstances, that such a charge, if true, brands with dishonor those persons guilty of the acts charged and if untrue it brands with dishonor the persons making the charge.

I exonerate Mr. Urion from personal responsibility as the person guilty of making that charge, and yet two more days have passed since Mr. Miller made that statement, and yet the evidence is not here. Now, I can only infer from that that there is no such evidence, and I now call upon my brothers on the other side to accept the alternative and to retract the charge. I am waiting.

Mr. Jackman: Go ahead.

Mr. Bryan: My brothers are silent. They, therefore, do not intend to retract the charge which they have been unable to support.

I, therefore, take the opportunity of denouncing, with all the force of which I am capable, the cause which would resort to methods of that character. It is, therefore, evident that my friends on the other side desired Mr. Urion to make the charge for the sole purpose of beclouding the issue and misleading the committee and obtaining the benefit of such publicity as a sensational charge directed against reputable people will always command. Further comment on that feature of it I think is entirely unnecessary.

Inasmuch as the charge has been made and the term conspiracy has been bandied about, I desire briefly, although I think it is irrelevant to a large extent, to explain the Borden Co.'s connection with this bill. I think I should do it out of fairness to the Borden Co. and particularly out of fairness to the other proponents of the bill who are

more vitally interested than the Borden Co. is, and whose cause will be prejudiced to the extent that there should be any lingering doubt in the minds of the committee on account of the charge as to conspiracy and as to the methods employed.

As regards the Voigt bill, I may say that the Borden Co. never heard of it until it was introduced and had proceeded some distance on its way toward passage in the House. The Borden Co. was interested, as it is in all legislation of this kind, because it is affected by it to some extent, and how I will show in a moment; and it got into touch with those in favor of the bill, and has, of course, favored its passage and has cooperated to a certain extent with the proponents.

So far as any specific activities were concerned, however, they have been confined to the appearance before the House committee of Mr. Walter Engels, who is the manager of the Borden Co.'s legal department, and who came at the invitation of Mr. Balderston, who has testified in these proceedings, and made a brief statement setting forth the Borden Co.'s position. That was the extent of his activity so far as I am advised in connection with the passage of the bill.

I had personally never heard of the Voigt bill, I believe, until after the House hearing had been completed, and I read in the paper such hearings had been held, and I wrote for information in October, 1921. Mr. Engels, of the Borden Co., then requested me to look into the constitutionality of such a measure. There had been some doubt expressed on that subject, and he asked me to make investigation and report, which I did, and submitted an opinion on the subject, which the Borden Co. decided to have published, and if the committee cares I will offer in the proceedings before we finish that opinion.

I heard nothing of the bill until shortly before these hearings were announced, when I received a request from Mr. Engels to come to Washington and be prepared to discuss the constitutionality of the bill.

I never had met Mr. Holman until I came into the committee room on the occasion of the first hearing. I had not met Mr. Balderston until the same occasion. I did not even know Mr. Holman by sight, because I had to inquire from some one in the room as to who he was and then make myself known to him.

Such part as I have taken in the proceedings has been more or less forced upon me by circumstances, by the attacks made on our company, and the general inclination attorneys have to mix into it whenever there is a fight in prospect. And so far as any charge that this bill has been introduced, fostered or fathered by the Borden Co., it is absolutely without any foundation whatever, and I stand on that.

I can not help calling attention to the fact that such a conspiracy as has been described would certainly have been gigantic and would imply that the Borden Co. has vaster powers and facilities than have been suspected up to this time.

Remember, the proponents of this bill include something over 500 organizations, farm organizations, the entire organized dairy industry over the country, federations of women's clubs, and the list of them is in the record. By the implication of the charge that any such unanimity of opinion could have been the result of conspiracy—I do not know what conspiracy would mean in such case.

Senator Kendrick: Mr. Chairman, I do not like to interrupt the line of Mr. Bryan's remarks, and I want to hear him until he has fully completed his statement; but as one member of the committee I think it only fair to him to say that a question of conspiracy one way or the other is of no importance whatsoever to me. The bill will stand or fall according to its merits, and the proponents of the [fol. 610] bill, those who have brought it in, as you say, introduced it, fathered and fostered it through the House, interest me not at all.

Mr. Bryan: Yes; I was confident that the charge would have no effect on the committee, but it was made publicly in the record and I feel an answer to it should be made.

Senator McKinley: Senator Kendrick has expressed my my opinion absolutely.

Mr. Bryan: We have no doubt on that subject, Mr. Chairman. I felt the committee would not be influenced at all, but that was the attempt, and I have taken the opportunity of refuting the charge for the record, as these proceedings will not doubt be published, and I do not want the charge to be unanswered, nor the absurd character of it left in any doubt.

The Borden Co. is interested in this bill and in similar legislation, and every other manufacturer of evaporated

or condensed whole milk is interested. We are not the only company in the business. Their interest lies in the fact that the compounds which are the subject of the Voigt bill result invariably in unfair competition, not such competition as is to be expected in the ordinary course of business and to be met by the usual methods, but in unfair competition.

It has been shown conclusively in these proceedings that there is a substantial identity in physical appearance of the evaporated milks and of the compounds; that they are marketed in cans of the same size; that their taste and odor are practically indistinguishable; that they are displayed in conjunction with evaporated whole milks; that they are frequently advertised and sold as evaporated milks and the consumers, in fact, frequently are deceived.

Now, a competition of that kind between a legitimate substance—I use "legitimate" in the sense of one which is in its natural state with everything that nature puts into it, without any abstractions from or additions to it—between such a substance and an imitation substance where the prices are at anywhere near the same level and where they sell under similar conditions and in the same market is such competition invariably the quality product is bound to suffer and suffer unfairly, not because the people who purchase know the difference and make their choice intelligently, but because the average consumer in many instances is in fact misled. The obvious suggestion might be, why do not the manufacturers of evaporated milk put onto the market competing compounds or milk compounds, so that the competition will be not between their regular full cream product and the compound, but should be between the other compounds and their compounds. That plan could easily be followed.

Mr. Chairman, there is no particular mystery or difficulty in the manufacture of milk compounds. Any condensery could have installed in it the necessary additional machinery, which is comparatively small in amount, and every one of them could put on the market a milk compound to compete with Hebe and such as are now on the market, but, Mr. Chairman, when you consider what the economic and trade consequence of so flooding the market with milk compounds is, you can readily understand why the great majority of manufacturers of evaporated whole milk do not desire to take that course.

Now, the result would seem to be this: You would have the market completely submerged by the compounds, and the result inevitably would be to create such a revulsion in the public mind not only against the compounds but against all the canned milks that it would result sooner or later in driving out of the market not only the compounds but the evaporated milks, as well, because in cases of this kind, Mr. Chairman, this has been the experience in similar matters in the past. The public does not discriminate between inferior canned products and the legitimate product of which the inferior one is an imitation. They simply realize that they are not getting the nutriment to which they are entitled if the use of it is continued for infant feeding, children, family use in general, which is bound to bring about a certain kind of use for feeding children, and the effects of malnutrition are bound to make themselves apparent in the course of time, and it will not be long before the effect is attributed not to the compounds but to all canned milks, and the result would be in the long run to practically destroy the market for evaporated milk as well as the compounds.

The manufacturers of evaporated milk do not view that prospect with complacency. Such temporary defense as they might make by putting on their competing compounds would be more than overbalanced in the long run by the damage which would surely be done to the industry as a whole. So for that reason there is a last legitimate, sound reason for the objection on the part of the manufacturer of evaporated milk to the compounds.

Now, from the economic standpoint, Mr. Chairman, it seems to me this is the most important feature that has yet been referred to in these proceedings; that if you destroy the market for evaporated milks or largely curtail the use of milk in condenseries for the purpose of evaporation you not only injure the manufacturers of evaporated milk, but you also injure the public, many of whom are in no position to get fresh milk and keep it under all conditions, and, therefore, must use the evaporated brands or none. And you will also injure the farmers and the dairymen, inasmuch as the market which the evaporated milk now offers to them will be curtailed and closed. Therefore the production of the raw milk itself will be undermined.

This is one of the most potent considerations from the economic standpoint which the committee has to consider.

This is not idle theory on the part of the manufacturers of evaporated whole milk, that their industry will be injured by the competition of an inferior imitation product. Exactly that thing happened in the case of the cheese industry.

There was a time, not so long ago, when certain manufacturers of dairy products would take the American cheese and substitute cottonseed oil and other vegetable oils for the natural constituents of the cheese and sell it. And the result was to create a revulsion against the American cheese which nearly destroyed the industry and which led to stringent regulation and in some cases prohibition of filled cheese.

We have precisely the same danger in this case, and a danger of greater magnitude, because the industry is greater and perhaps more important. And for these reasons, Mr. Chairman, the Borden Co. has cooperated in the passage of this bill and favors such legislation, not in the attempt or desire to drive from the market one competitor compound, but to save the market for all manufacturers of evaporated milk.

I shall pass on as rapidly as I can, because I do not believe the committee desires to be kept too long on these matters.

I will take up next a brief review of the existing law on the subject, principally because our friends on the other side have raised the question and have taken issue with the statement made by the Supreme Court of Wisconsin that a number of States have prohibited milk compounds.

The facts are there—there are three States which have passed statutes substantially identical in principle with the Voigt bill; that is to say, which define milk compounds similarly to the definition contained in the bill, and which prohibit the compounds by name; that is, by description. Those States are New Jersey, New York, and Wisconsin. Those statutes were all passed during the past two or three years, because up to that time the milk-compound industry had not attained great proportions and the damage done had not become apparent.

It was the Wisconsin statute which came before the Supreme Court of Wisconsin and which was sustained

as to its constitutionality, as I will refer to in a moment or two.

In addition to these three States there are several others which have on their statute books laws which have the effect of prohibiting milk compounds, although they were passed before compounds were made. The typical States of that kind are Ohio and Maryland, and there are similar statutes in Colorado, Connecticut, and Florida. That is the statement of the court, and I have glanced over the laws and they seem to be substantially the same in principle and in wording as the Ohio and Maryland laws.

Those statutes were passed long before the compound business had begun, I believe and certainly before compounds had become well known. These statutes, in effect, prohibit the sale of condensed skim milk, the product which has been offered here before this committee, and as to which the committee has made certain inquiries as to whether or not this bill should be extended to prohibit those products also.

There was a time when the condensed skim milk industry in certain places was having the same effect that the compound competition is now; that people were misled, and the revulsion was becoming manifest, but that has been more or less cleared away in those localities, some time before the compounds came on the market. When the compounds made their appearance, however, it was not long before the Ohio courts were called upon to decide whether or not a statute of that character, which prohibited condensed skim milk also prohibited the sale of milk compounds.

That was one of the principal questions involved in the Hebe case in Ohio, and the Federal district court in Ohio, consisting of three judges, held, and the Supreme Court of the United States sustained their holding, that a condensed skim milk statute did reach and prohibit the sale of Hebe—a milk compound; that it was none the less condensed skimmed milk because of the fact that a small amount of vegetable oil had been substituted for the cream taken out and, in other words, you could not evade the prohibition of the statute by taking the prohibited article and adding a small quantity of something else, dressing it up in a distinctive package and selling it under a fancy name.

The Supreme Court said also it was skimmed milk even though disguised in that way.

[fol. 611] Now, the same holding has been made in the State of Maryland, and I shall refer to that case in a moment, because Mr. McKee has made an extended reference to it, so that Hebe and milk compounds are not salable in Maryland except in 10-pound packages; in which form, of course, they are never put up. So the prohibition is, in effect, as complete as in States prohibiting it by name or in the Voigt bill if it is passed.

As far as the other States which have the same law as Ohio and Maryland are concerned, it may be true that no test suits have been brought, but in those States the law means the same thing as it means in Ohio and as it means in Maryland, and if I may submit, with all reasonable deference to my friends on the other side, I think there is no question what the Supreme Court will decide when those cases are brought before it, with the Ohio decision and the Maryland decision one way and none on the other side, and common sense being on the side of prohibition. I have no doubt whatever what the courts in those States will decide when the case comes up.

So, to all intents and purposes, milk compounds are prohibited in those States the same as in the ones where they are prohibited by name.

Finally, there are three other States—California, Oregon, and Utah—in which the statute in substance requires that condensed skim milk and milk compounds, if sold at all, must not only be labeled to show what they are, but must bear the caption "Imitation milk," and be sold under certain restrictions which the statute prescribes, and the Supreme Court of Wisconsin says the restrictions are so onerous as to practically exclude the sale of milk compounds.

I might say right there that I have been informed, although I have no personal knowledge of the fact, that some of these compounds have been offered in the markets of those States from time to time and have been marked as the statute required, "imitation," thereby admitting they are not a distinctive article, but an imitation of the standard article. No other proof is required.

And in view of those facts the Supreme Court of Wisconsin said that it will be seen that the compounds have been

considered inimical to the public welfare by a large portion of the people of this country.

And the Supreme Court of Wisconsin, although it was not bound any more than this committee is bound by the findings in other States, felt that was a matter to be considered in passing upon the reasonableness and policy of the statute.

So that this is not a new question and not a new fight. Prohibition is not unheard of. It is quite common. The Hebe Co. and other milk compound manufacturers have had to face this question. They are not before this committee for the first time, but have been before courts and in legislative halls for several years. If there is any conspiracy, they have had every opportunity to investigate it and to prepare to show it to this committee before this hearing.

The experience in Maryland was more or less typical of that of other States, I presume. It was the most recent State case decided—rather, instituted, certainly—and I think the committee might be interested in what happened there.

In Maryland we had in 1900 a statute of the Ohio class which prohibited the sale of condensed skimmed milk. That statute went to the Supreme Court of Maryland as early as in 1908 in the case of Rider *v.* State, in which the statute was construed as applying to condensed skimmed milk, even though labeled as such, and the statute was by inference sustained. In fact, the other side did not even deem it worth while to question the constitutionality of it.

In the two legislatures which followed the decision in the Rider case, bills were introduced at the instance of manufacturers of condensed skimmed milk which were designed to amend the Maryland statute by permitting the sale of condensed skimmed milk if labeled to show what it was. Those bills were opposed by the public health authorities of both the State of Maryland and the city of Baltimore, by physicians and dieticians, by charitable organizations, and labor organizations, and as a result they did not get very far. Both of them were killed.

So nothing was done on this subject until about the latter part of 1919, when Hebe first began to be extensively sold. In the spring of that year some one wrote in to the attorney general's office and made an inquiry as to whether condensed skimmed milk or milk compound could be sold in the State of Maryland and received an answer by way of a

three or four line letter to the effect that the attorney general was of the opinion that the skimmed milk statute had been repealed by implication through the passage of the general pure food and drugs act; 1912, I think, was the passage of the general act. And the result of that decision was that Hebe then began to come upon the market in Baltimore.

It was not long before it attracted attention. I was then asked by a local distributor of canned goods, who was the broker that handles the Borden Co.'s products, to look into the matter and see what the situation was.

Mr. Jackman: That is your uncle, is it not?

Mr. Bryan: Yes; it happens to be.

I looked into it and found this decision. It was then too late to bring the matter up for review before the then attorney general, because an election had just been held at which a new one had been elected, but he had not taken office. But shortly after the new attorney general took office I called his attention to the matter and asked what the situation was. He was interested and said that he would, if approached by an official of the State of Maryland, be glad to review the matter and give an opinion. I therefore brought the matter to the attention of the State board of health, which was then and is still led by Dr. William H. Welch, the founder and head of the great school of hygiene at Johns Hopkins University, and under the leadership of Doctor Welch the State board of health immediately took the matter up and asked the attorney general to review the former opinion, and pointed out to the attorney general of Maryland what serious consequences, in the judgment of the State board of health, would follow if the former opinion should be sustained and the sale of the compounds permitted.

That was the proceeding which Mr. McKee referred to in his statement on Friday. And, as he said, the attorney general received briefs and had oral arguments from the various parties interested.

The Hebe Co. engaged two extremely able attorneys, one of whom is perhaps the ablest and perhaps the most prominent trial attorney at the Baltimore Bar, and the other of whom is an extremely capable younger lawyer, who happened to be at that time also one of the assistants in the office of the attorney general himself.

After giving every consideration the attorney general of Maryland handed down his opinion in which he overruled the snap judgment—it was nothing but that—of the former attorney general, and held that the statute was still in effect and that it prohibited the sale of milk compounds.

In the meantime a bill was introduced in the Legislature of Maryland, at the instance of the State board of health—I believe at its suggestion—in which the former law was amended so as to contain the prohibition of the sale of condensed skimmed milk, and by implication compounds in small packages, but permitted its sale in packages of 10 pounds or more in bulk for manufacturing purposes.

That was done because of the arguments made and the feeling of the board that there is not the same danger involved in the use of skimmed milk in manufacturing and in the making of bread, candy, and things of that kind as there was in its household use, and it felt it did have a legitimate place in the field of manufacture which it did not have in the home.

That amendment was made solely at the suggestion of the State board of health. It was their own idea and nobody else's. Therefore, when the statute had been passed and the new opinion had been published a test case was made in Baltimore City to determine whether or not the attorney general was right. It took the form of an indictment against a grocer for selling a can of Hebe, and at the trial the Hebe Co. was represented by Mr. McKee, and by the same attorney, the leading attorney, who had appeared for it before the attorney general, and he is, as I said, perhaps the ablest, perhaps the most effective trial lawyer before the Baltimore bar, one of the older men, one of the recognized leaders of the bar.

I may add there that I had kept in touch, of course, and took an active part in all this matter before the attorney general and in the legislature, and I was invited by the attorney general to participate in the prosecution of the case. There was not any hard feeling about it; it was simply a test case. I therefore sat at the trial table and took more or less active part in the presentation of the case, and quite an active part in the preparation of it.

The trial lasted four days and was before a jury. I might state for the information of the committee the reason for a jury trial was simply this: In Maryland the jurors, under the old English common law principle, are in control and are

the judges of the law as well as of the facts, and therefore the decision of any criminal case is going to turn in its last analysis, in some instances certainly, on not only whether or not the jury really thinks the defendant guilty of the thing he is charged with doing, but really upon whether the jury wants to see the defendant punished for doing it. In other words, the jury has the power under our law and our system to set aside any law of which it does not approve.

I may say in that connection that every Sunday in Baltimore we have a game of professional baseball in spite of the fact that there is a statute on the books which is certainly susceptible of the construction that baseball should not be played on Sunday, and every two or three years they have a test case, which takes the form of having a player indicted, and he is brought before the grand jury and often the grand jury dismisses the indictment, which settles it for the time being; but occasionally a grand jury having a little more—what shall I say—with a different viewpoint, will sometimes indict the defendant, and then they have a trial before a petit jury, and invariably the question is not whether or not this man played baseball on Sunday, because 10,000 or 20,000 people saw him do it, but whether he is guilty as charged. And invariably they find a verdict of not guilty, simply because they want Sunday baseball and think it a fool law, and they are not going to enforce it.

[fol. 612]

All these facts were known to the astute counsel who represented the Hebe Co. in this case, and that trial before the jury, Mr. Chairman, was not a trial of the defendant, but was simply a trial of Hebe, pure and simple. They had their experts there—not as many as they had this time, but they had the representative ones who testified to everything they testified to here. The State had Doctor McCollum and one or two other persons, and also the secretary of the board of health, Dr. Fulton, who has been active in these affairs for quite a number of years; and the State also had as a witness the commissioner of the board of health of Baltimore city, Dr. C. Hanson Jones, perhaps one of the ablest health officers in this country, doing health work in Baltimore city for the last 10 or 15 years; and they all testified as to their opinion of compounds, Hebe, etc. And in the argument and summing up the defendant's counsel simply confined his argument practically to an appeal to the jury, just exactly as made here, that Hebe is good; it is

a trade war, that the Borden Co. is trying to put a competitor out of business, that the Supreme Court and the other courts have no greater authority before a jury than the opinion of any other man, and when the Supreme Court says Hebe is skimmed milk under the statute the Supreme Court did not know what it was talking about. In other words, it was plainly a plea to the jury to ignore and set aside the statute and let Hebe be sold. And all these changes were rung before the jury in the four-day trial and in the argument at the end. Well, it took the jury just about 10 minutes to decide the case. They came back and the verdict was "Guilty as charged," and the defendant was duly fined, and from that time to this, so far as we know, no Hebe or other compound has been sold in the State of Maryland.

Mr. Holman: May I ask whether there were any farmers on that jury?

Mr. Bryan: There were not. It was a typical city jury and not a single farmer or dairyman or any person engaged in the milk business on the jury. They were laboring men, clerks, retired business men, and the ordinary types that make up our city juries, the great majority of them people of slender means; and for that reason the counsel for the defendant made a very impassioned plea for the poor man, that he should be permitted to get this nutritious cheap food and not be compelled to pay the high prices for evaporated milk. The jury did not have a bit of trouble on that score.

Those are the facts of the Hebe case in Maryland. If Mr. McKee desires to make any comments on that he might do it before I pass on to something else.

Mr. McKee: I will ask if the dairy commissioner did not testify that he did not receive any complaints on the sale of this product?

Mr. Bryan: I do not know; perhaps he did. But he also produced some advertisements which showed that Hebe had been sold as milk, listed under the head of filled milk, etc. He also said he had talked to the managers of the Sanitary grocery stores, the ones referred to here, who have a chain of stores in Washington and in Maryland, I think there may be some in Baltimore too, because the commissioner had heard the Sanitary was selling Hebe and called the manager to find out about it. The manager of the Sanitary

grocery stores stated to the food commissioner Hebe had been sold in Washington but was not being sold in Maryland, and that he was about to discontinue it in Washington; because of the confusion in sales he thought best not to sell it at all. That may be the reason, as far as I know, why you can not get Hebe in the Sanitary grocery stores.

Now, I have only a few more words to say. It has been a long hearing and I am nearly through. I will now refer very briefly to the constitutionality of the bill, for the reason that I understand one of the committee has asked about it, and, furthermore, in this pamphlet of the Hebe Co., this exposé which contains the conspiracy charges, one of the points against it is that it is in flagrant violation of the rights under the Constitution, and I think for the completeness of the record I should refer to that

Senator McKinley: I will assure you I have not read it.

Mr. Bryan: This was read to the committee by Mr. Crion. I do not know whether he read that particular point, but he has offered the pamphlet and he read the main points urged against the bill, so for the record I think it would be desirable to have at least a few words on the constitutional feature of it.

Now, on that point there is really very little need be said, because it does not seem to me, after very careful study, there can be any reasonable doubt as to the bill being constitutional. In considering whether Congress has the power to pass a statute the courts have to determine: First, whether or not there is a real evil which the statute is designed to correct; and, secondly, if there is whether Congress has the general power to legislate on a matter of that character.

As regards the evil, to point that out would merely mean to rehash most of the testimony which has been offered here by the proponents of the bill. I shall not attempt of course, to do that. The ultimate facts are that milk compounds are not as nutritious as milk; that their use for the diet of infants and young children, and to a certain extent of adults, is attended with certain nutritional disorders; that Hebe is deceptively sold—I mean all milk compounds are deceptively sold, and some of them are deceptively labeled—not Hebe, but some of them are deceptively labeled to create the impression they are milk; that in many instances grocers have stated they are the same, one as good

as the other, and in not a few instances grocers have definitely stated that Hebe was just as good as milk for infant feeding.

Of course, it is hard to prove specific instances of feeding children this way; but at least two cases have been shown that came to the attention of the Hebe Co., and there are affidavits as to more cases, and considering the probability that this article is put out on the market in a form so similar to other evaporated milks that are used for the purpose of infant feeding as to convince the average consumer that they are similar—and it works out that way—the consumer is going to be misled in many instances. So there is no doubt in our minds the compounds are used for feeding young children. They are certainly used in the feeding of more mature people in the soups, custards, and other things which the Hebe cook book so alluringly describes and we have also seen, in fact, that in some instances the infants may feel the effect of it through the use of Hebe by the nursing mother, even while at breast.

You know Doctor McCollum said the mother's diet should be most carefully safeguarded for that reason, and Doctor Gittings also stated, following out that line, that the effect of a diet of Hebe on a nursing mother would most certainly be expected to have an effect on the nutrition of the child. And even aside from the matter of babies particularly, the fact is that the public can be and is deceived; that Hebe can be and is used—I am speaking of compounds always when I say Hebe—as a means of fraud and deception.

Therefore, there is a strong reinforcement of this in the fact that the retailer does make larger profits on compounds, as they sell at nearly the same price as the evaporated milk, whereas the price to him is much smaller.

The evils to be combatted are to prevent the use of compounds as an incident of fraud and deception on the public, with the resulting evils to the consumer that have been suggested, and with the damage to the dairy and farming industry which the displacing of milk by compounds will certainly bring about.

That is the evil.

Now, as to the power of Congress to legislate on that evil, I think that is sustained amply by the interstate commerce clause, which gives the Congress power to regulate interstate and foreign commerce, and on that point it has been

held in many instances that the power of Congress is plenary, just as much as the power of any State in the Union, over anything under its jurisdiction. The power to exclude, if that is the best means of removing the evil is laid down in the Rider case in 188 United States.

Senator McKinley: I think we accept that.

Mr. Bryan: That has been followed in various States by the passage of pure food and drug acts which the Supreme Court has repeatedly reviewed, and it upholds the power to exclude misbranded and deleterious articles. So the power to exclude is established.

It has also been established by the Supreme Court decisions beyond any question that Congress in legislation on any matter within its own competency has a corresponding power to that which the State has in legislating on a matter within the State competency, and that there are no greater limitations on the power of Congress to exclude from interstate commerce any article than there are on the powers of the States to exclude from domestic commerce similar articles.

Now, having established those questions the constitutionality of this statute has been established by the decision in the Hebe case by the Supreme Court, because the Hebe case from Ohio did involve the constitutionality of the Ohio statute which excluded Hebe from domestic commerce, and that was the point also involved in the Wisconsin case which has not gone to the Supreme Court.

The statute was attacked on the ground that it was a violation of the fourteenth amendment, and the Supreme Court held that it was not and, therefore, the statute was constitutional. Now, inasmuch as the Supreme Court has laid down in other cases that there are no greater limitations on Congress in legislation in relation to interstate commerce or anything else that it can act on by the fifth amendment than there is laid on States by the fourteenth amendment, it is simply a matter of elementary logic that if this statute was valid under the fourteenth amendment [fol. 613] when passed by the State, it must be valid under the fifth amendment when passed by Congress. That is all that need be said on the constitutional feature.

It should be sustained also on the ground the Voigt bill will do nothing more in effect than define Hebe as an adulterated article.

Senator McKinley: Right there, do you think the word "deleterious" should be eliminated?

Mr. Bryan: We do not object to that. I think it should be, frankly. If you state it is adulterated it would be entirely sufficient and in accordance with the facts.

As I read into the record the other day, among adulterations are the addition of anything to the substance or the taking away from it, of anything which would reduce its quality, purity, or strength. Hence, milk compounds would be adulterations of milk under the present statute, except they have been hitherto allowed to be sold under the compound proviso in section 8 of the present statute, which says: "In the case of mixtures of compounds which may be now, or from time to time hereafter known as articles of food, under their own distinctive names, and not in imitation of or offered for sale under the distinctive name of another article"—the statute now says, such compounds can be sold despite the definition in the first section, if not sold in imitation of or under the distinctive name of another article.

This bill will do nothing more in effect than to take Hebe out of the protection of the compound proviso on a finding of Congress that the sale of Hebe is offered as an imitation of or sold under the name of another article, which applies certainly to the retail selling, and it is in imitation of something and so labeled, and some States say it must be labeled that way. So the only effect of the Voigt bill in substance is to extend the definition of "adulterated," which is already in the statute, and make it apply to Hebe in spite of the fact it is sold under a trade name.

It merely comes down to this, that Congress is not compelled to give the benefit of the compound proviso in section 8 to any compound which is found to be susceptible to this illegitimate use, which has been so amply proven in the testimony before the committee. So on that ground alone this bill could be amply sustained.

Senator McKinley. Here is the proposed change to cover S. M. X. that you have agreed on, Mr. Holman.

Mr. Holman. Yes, sir; we have agreed on that, and if I may interpose, the Towner amendment to the bill as it passed the House we feel to be a little ambiguous—the amendment introduced in the last stages of the session by Representative Towner—and so far as we are concerned we

would prefer some reading like the following, in place of that.

"Filled milk as herein defined is declared to be an adulterated product and its sale to constitute a fraud on a large part of the public."

That, of course, is submitted roughly for the committee.

Senator Ladd: You are submitting that to the committee, are you?

Mr. Holman: Yes; just roughly as a suggestion.

Mr. Bryan: Finally, the constitutionality may also be sustained on the ground Congress has the power to prohibit the interstate shipment of filled milk as an incident of its power to establish standards for the purity and strength of foods shipped in interstate commerce, and that power to establish standards and to require certain minimum nutriment in articles of food has been fully sustained by the leading case of Buttfield v. Stranahan (192 U. S. 470).

That, briefly, will indicate the reasons for my feeling that the bill is entirely constitutional beyond any reasonable doubt, so I shall not attempt to go further on that point, but will ask leave to file with the committee copies of the court's opinion in the Hebe case in Ohio.

Senator McKinley: Ohio?

Mr. Bryan: Yes; that came up from Ohio to the Supreme Court. It is the case of Hebe et al. v. Shaw (248 U. S. 297), and the same case below in the District Court for the Southern District of Ohio, reported in 246 Fed., page 711, which case was heard before District Judges Warrington, Slater, and Hollister, sitting together in that case.

Finally, the opinion of the court in the Wisconsin case, which has already been filed. And I will file a copy of this memorandum of law which I have prepared on the question of constitutionality.

I may add the fact that the biographical data and summary given in the beginning was worked out after it left my hands and was not part of the original opinion.

Mr. Urion: Have you cited the child labor decision by Chief Justice Taft recently?

Mr. Bryan: I shall be glad to. The only case in which a prohibition from interstate commerce has been stricken down was in the case of products of child labor.

The answer to that suggestion is simply this: What the Supreme Court held in the child labor cases—I mean the

first one, which struck down the exclusion from interstate commerce of the products of child labor—was that it was not a regulation of interstate commerce at all, but was simply an attempt by Congress to regulate the internal affairs of the producing state, and the Supreme Court pointed out the fact that in all other cases where exclusions from interstate commerce had been sustained the reason was that interstate commerce was being used for carrying to the consuming state articles which were deleterious, fraudulent or something of that kind, and that while Congress did have the full power to exclude from interstate commerce such articles, for the protection of the consuming public, yet, the Supreme Court said, when you come to use regulation of interstate commerce as a means of prescribing under what conditions an article shall be produced, and for the purposes really of regulating labor standards in the producing state. That is not a regulation of interstate commerce at all.

The other child labor case recently decided demonstrates the wisdom of the decision of the proponents on this bill in framing the Voigt bill in not relying on an indirect prohibition by a tax, because after the decision of the child labor case the opponents to child labor had a bill passed which would attempt to forbid child labor by laying a prohibitive tax on the products of child labor, and that was the second child labor case, recently decided, and in that the Supreme Court held that the purpose of the tax was not to raise revenue, but was simply attempting to do indirectly what Congress could not do by regulating means of production, and was unconstitutional.

Senator McKinley: I might suggest again there is not a single lawyer, so far as I know, on the Committee on Agriculture.

Mr. Bryan: Well, the question was raised, and we felt we would not be fully presenting our case unless this matter was fully put in the record. The last discussion was over Mr. Urion's question.

We submit the bill is constitutional and should be passed, and if passed would be sustained.

Mr. McKee: Do I understand that your clients, the Borden Co., are opposed to the sale of sweetened condensed skim milk?

Mr. Bryan: What their attitude is on that subject I will confess I do not know at the present time. There was a

time when they were opposed to it and that was the time I took an active part in the Rider case in Maryland, which was against condensed skimmed milk. Whether that product is still sold so extensively at this time as to constitute a menace to the industry, as the sale of the compound does, I do not know. That is a question I can not pass on.

Mr. McKee: The Nestles Food Co. appeared in opposition, did they not, Mr. Bryan, the Square brand?

Mr. Bryan: Yes; at that time, in 1908, I do not know whether the Nestles Co. owned the Square brand. In other words, the Square brand, which was put before the committee the other day, was manufactured by the Hires Condensed Milk Co.

Mr. McKee: Now owned by the Nestle people.

Mr. Bryan: I have since been informed the stock control of that company has been bought by the Nestles Food Co. I may say on that, although it may be irrelevant—but there was much irrelevancy in the case and an additional statement can not do any harm—I understand the Hires people or one of the associate industries, has the Square Brand milk. I was told that by the Baltimore representative of the Hires Co., and he stated that his company was opposed to the sale of the compound, but that if compounds were to be sold it would be necessary for his company to have a brand so as to protect its market, but he would much prefer to have it excluded, and that he would not, therefore, put that brand on the Baltimore market if there was any likelihood of our statute being so construed as to exclude the sale of it, and he would do everything he could to bring about a construction that way, because he did not want to sell it, because he felt the manufacture of filled skimmed milk would hurt and finally destroy the entire market for evaporated milk.

I know one or two manufacturers of compounds are doing it in self defense, but are anxious to see this bill pass so they will not have to do it.

I have no authority to speak for the Hires people in that connection, but that is what I was told by Hires' Baltimore representative.

Mr. McKee: The purpose of that was to exclude the condensed sweetened skimmed milk from the Baltimore market, was it not?

Mr. Bryan: At the time the Rider case was decided; yes.

Mr. Jackman: These statements introduced by the proponents of this bill were supposed to be in rebuttal, but there have been many new things gone into, if the committee will bear with me for two or three moments.

Mr. Bryan has made the statement that the sales of compound interfere with the sales of condensed or evaporated milk. The Carnation Milk Products Co.—I am speaking [fol. 614] now entirely from a business standpoint—are very large manufacturers of evaporated milk, with a chain of plants running from the Pacific to the Atlantic. They would be extremely foolish, if it were a fact, as Mr. Bryan has stated, that it did interfere, to manufacture a product which would be in competition with their own evaporated milk where the profit in the sale of the compound was less than the profit in the sale of the evaporated milk. That seems to be self-evident.

In order that there might be some definite survey and that they might know where they were, Professor Aggar and one of the associates of a Massachusetts college were asked to make surveys, and Doctor Aggar has testified here, and I want to present a graph of this survey, showing that the statement made by Mr. Bryan that it does interfere is incorrect.

Mr. Bryan: I will say that is simply the prevailing opinion among manufacturers of condensed evaporated milk. I have no knowledge on the subject.

Mr. Jackman: I do not think that is true, when you say it is the prevailing opinion, because it is not.

I want to say in addition to that Mr. Taylor Wilson, who was perhaps one of the best technically educated men in the Indiana Condensed Milk Co. before he engaged in the manufacture of this compound, made a very complete survey with the aid of chemists and others and arrived at the conclusion which is borne out by this graph.

This graph on the top line shows a survey in five midwestern cities. The black line is the line showing the ups and downs of the evaporated and condensed milk market; the dotted line shows in the sale cities the compound. The bottom line black shows the ups and downs in five southern cities, and the dotted line below shows the milk compounds, showing that they run practically together. When one goes up the other goes up. And, as Professor Aggar has told

you, it has absolutely no effect at all upon the market. It is a separate, distinct market, which has been developed.

In passing I will file this for the record.

(Whereupon the graphic chart so described was filed with the committee.)

Mr. Jackman: These statements with refgrence to the constitutional questions——

Senator McKinley: You are not going into that very far, are you?

Mr. Jackman: I am not going into that. Do not get scared, Senators. I had conceived that this was no place to enter into a constitutional argument. The proper place for a constitutional argument would be either before the Judiciary Committee or before a court, and not here, because, as Senator McKinley stated at the opening of this hearing, you gentlemen are not lawyers, and you are not familiar with the decisions and technicalities and the differences between the police power of the States and the power of Congress under its so called delegated powers.

Senator Kendrick. I might say to the gentlemen that we are a little bit shy of lawyers in the Senate. I think there are only 76, but it might be that some of those would have time to pass upon the constitutionality of the law.

Mr. Jackman: I am not even going to call your attention to that, but I do not want this record to be printed without a challenge of the statements that have been made here by Mr. Bryan as to what the law is. If the committee desires to take the time or any of the 76 lawyers in the Senate desire to take the time, they can find a discussion in the briefs filed in the eighteenth amendment argument in the Supreme Court here that are about as full and complete upon the powers of Congress under the delegated powers as they can be, and which do not bear out the contentions of Mr. Bryan. One of those briefs was filed by former Senator Elihu Root, of New York, and they do not bear out the contentions that have been stated to this Committee. All I desire to say in connection with the constitutionality is that Congress under its interstate commerce clause has not the power that a State has under its police power. The State can legislate much more broadly than Congress can legislate, and since the decision in the Supreme Court of the United States in the case of Schollenberger against Pennsylvania, which was an oleomargarine case, followed by the decision in Collins against

New Hampshire, which was another oleomargarine case, there has been no attempt made by anyone to claim, as far as I know, and I think I am somewhat familiar with the situation, that Congress has the power to legislate off the market a wholesome, nutritious article of food in interstate commerce.

If this committee finds as a matter of fact, and the facts bear them out, that Hebe or the milk compounds are deleterious food products, nonnutritious, then Congress would have the right to legislate, but you can not make that finding on this record, and Congress has not the power to legislate on the question of degree.

For example, you might say that whole wheat flour was more nutritious than wheat flour, but so long as wheat flour is a healthful, nutritious food product, although it may not be as nutritious as whole wheat flour, Congress can not legislate on the question of the degree of the nutrition.

These decisions in Schallenberger against Pennsylvania and Collins against New Hampshire, and a great many other cases, which have been handed down, before the recent Child Labor case, and you may be familiar with that decision on the migratory bird act and many other acts, where these powers of Congress have been defined.

I do not want to go into that unless the committee wants me to, and I understand Senator McKinley to say he does not want it.

Senator McKinley: I do not want to hear it, but I do not want to bar Senator Kendrick from hearing it if he wishes.

Mr. Jackman: I do not think he wants to hear it. This is a case which the committee might find could properly be referred to the Judiciary Committee for its advice and opinion on the subject, and I do not want this record to go unchallenged so far as the statements of law are concerned.

Now, I would like on behalf of myself, Mr. Urion, and Mr. McKee, to thank you gentlemen for the patient and courteous treatment we have received at your hands.

Mr. Bryan: The statements in argument may not have been sustained in the brief of ex-Senator Root, but they were sustained by decisions of the Supreme Court, which I think is a higher authority than Senator Root.

The case was presented in the Supreme Court by no less a person than Charles Evans Hughes, after he retired from the Supreme Court, and yet the Supreme Court sustained the Ohio statute.

Mr. Jackman: It is only fair to say in that connection, and I think you ought to tell the committee—and I have the opinion of the court here—that the opinion of the Supreme Court contains this language:

"The defendants"—

That is, the State of Ohio—

"disclaim any intention to interfere with the sale of the goods in the original package by the consignee."

The question of interstate commerce was not involved in that case at all.

Mr. Bryan: That is entirely true. The principle would be precisely the same, and we welcome the challenge to test this before the courts or before the Judiciary Committee.

Mr. Holman: Mr. Chairman, may I, before we close, respond to just one point made by Mr. Jackman in reference to the chart which he displayed to the committee? It is entirely conceivable to the dairy farmers that a manufacturer producing in the same factory a compound and also a whole evaporated milk might, through a study of the sales of those two commodities, find that the compound was holding its own on the market and even gaining. That does not solve the problem of the dairy farmer. That is a manufacturers' problem. But to the dairy farmer the fact that the compound is holding its own or is gaining is a serious menace and brings up to him a grave question as to the number of cows that he will plan for.

I wish, on behalf of my colleagues among the farm organizations and the consumers and labor organizations represented here, to thank you for the great courtesy and the spirit of fairness that has been displayed in regard to the presentation of the testimony on both sides of the case.

Senator McKinley: If there is nothing further, we will close.

(Whereupon the hearing was closed and the committee adjourned, subject to the call of the chairman.)

[fol. 615] DEF. EX. NO. 27B FOR IDENTIFICATION

Calendar No. 963

SENATE

67th Congress, 4th Session

Report No. 987

Filled Milk Legislation

January 3 (calendar day, January 4) 1923—Ordered to be printed

Mr. Ladd (for Mr. Norris), from the Committee on Agriculture and Forestry, submitted the following

Report

(To accompany H. R. 8086)

The Committee on Agriculture and Forestry, to whom was referred the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce, having considered the same, report favorably thereon with certain amendments, and, as amended, recommend that the bill do pass.

Your committee recommend a slight change in the wording of the bill as passed by the House of Representatives, which does not change its meaning or purpose, and the insertion of appropriate language to permit the shipment in interstate and foreign commerce of proprietary food compounds designed and prepared solely for feeding infants and young children. The House bill as amended follows, with matter to be omitted struck through, and matter to be inserted appearing in italics:

An Act to prohibit the shipment of filled milk in interstate or foreign commerce

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever used in this act—

[fol. 616] (a) The term "person" includes an individual, partnership, corporation, or association;

(b) The term "interstate or foreign commerce" means commerce (1) between any State, Territory, or

possession, or the District of Columbia, and any place outside thereof; (2) between points within the same State, Territory, or possession, or within the District of Columbia, but through any place outside thereof; or (3) within any Territory or possession, or within the District of Columbia; and

(c) The term "filled milk" means any milk, cream, or skimmed milk, whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated, to which has been added, or which has been blended or compounded with, any fat or oil other than milk fat, so that the resulting product is in imitation or semblance of milk, cream, or skimmed milk, whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated, [and as such is an adulterated and deleterious article of food, and when marketed as such constitutes a fraud upon the public].* *This definition shall not include any distinctive proprietary food compound not readily mistaken intesta for milk or cream or for evaporated, condensed, or powdered milk or cream, provided that such compound (1) is prepared and designed for feeding infants and young children and customarily used on the order of a physician; (2) is packed in individual cans containing not more than 16½ ounces and bearing a label in bold type that the content is to be used only for said purpose; (3) is shipped in interstate or foreign commerce exclusively to physicians, wholesale and retail druggists, orphan asylums, child welfare associations, hospitals, and similar institutions and generally disposed of by them.*

SEC. 2. *It is hereby declared that filled milk, as herein defined, is an adulterated article of food, injurious to the public health, and its sale constitutes a fraud upon the public.* It shall be unlawful for any person to manufacture within any Territory or possession, or within the District of Columbia, or to ship or deliver for shipment in interstate or foreign commerce, any filled milk.

SEC. 3. Any person violating any provision of this act shall, upon conviction thereof, be subject to a fine

* Struck through in copy.

of not more than $1,000 or imprisonment for not more than one year, or both; except that no penalty shall be enforced for any such violation occurring within thirty days after this act becomes law. When construing and enforcing the provisions of this act, the act, omission, or failure of any person acting for or employed by any individual, partnership, corporation, or association, within the scope of his employment or office, shall in every case be deemed the act, omission, or failure of such individual, partnership, corporation, or association, as well as of such person.

[fol. 617] What Is Filled Milk?

It is a compound of skimmed milk and coconut oil. The manufacturers buy the whole milk, separate the butter fat, and sell the latter for cream or use it in the manufacture of butter. The skimmed milk is then mixed with from 3 to 4 percent coconut oil, and this mixture is then reduced by evaporation to about half its bulk. The coconut oil is reduced in bulk very little, if any, by the process of evaporation, so that when the compound is ready for canning it consists of skimmed milk reduced to about half its bulk, and, as the coconut oil was not reduced in the process of evaporation, from 6 to 8 percent of the oil. The compound is an exact imitation of evaporated milk, in color, consistency, smell, and taste, and the difference between it and evaporated milk can only be ascertained by chemical analysis. The compound can be manufactured for less than half of the cost of evaporated milk. The Bureau of Agricultural Economics, United States Department of Agriculture, furnishes the following figures showing the production of filled milk:

(Expressed in Pounds)

Year	Canned	Bulk	Total
1916	42,000	14,134,712	14,176,712
1917	18,504	17,489,064	17,505,568
1918	41,033,855	7,591,182	48,625,037
1919	62,262,221	2,748,120	65,010,341
1920	84,044,000	2,517,000	86,561,000
1921	59,020,000	5,873,000	64,893,000

[fol. 618] Method of Labeling and Marketing

The pure food and drugs act (sec. 7) provides that an article of food shall be considered adulterated "if any

substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength", of "if any substance has been substituted wholly or in part for the article", or "if any valuable constituent of the article has been wholly or in part abstracted", and shall be considered misbranded (sec. 8) "if it be an imitation of or offered for sale under the distinctive name of another article." However, section 8 of this act has a proviso under which the manufacturers of filled milk claim the right to manufacture it, to the effect that an article shall not be considered adulterated or misbranded "in the case of * * * compounds * * * under their own distinctive names, and not an imitation of or offered for sale under the distinctive name of another article."

The manufacturers of filled milk do not label their cans as "milk", as that would be a violation of the act, but use such trade names as "Hebe", "Carolene", "Majal", "Nutro", "Enzo", "Nyko", "Silver Key". The compound is put up in the same size and style of cans as the genuine evaporated or condensed milk and is carried by the retail dealers on the shelves side by side with the genuine product. Your committee does not doubt that the sale of filled milk as at present carried on is a violation, if not of the letter, of the spirit of the pure-food and drugs act. This act can not regulate the conduct of the retailer dealer. He can buy this compound for about 3 cents per 1-pound can less than he is obliged to pay for the genuine article. Many instances were brought to the attention of [fol. 619] your committee where retail dealers advertised the compound as "Hebe milk", "Silver Key milk", etc., and investigations conducted in many of our large cities reveal that the dealers were selling the compound as being as good and better than regular evaporated milk. It was shown that the compound was largely sold in sections of cities inhabited by people unable to read the label and people of limited means.

One of the great dangers incident to the marketing of filled milk lies in the bulk sales. The statistics for the past year show that the sale in bulk is now on the increase. When used in hotels and restaurants and for making ice cream, the consumer has no means of knowing what he is getting, and a label could not protect against fraud in such a case. If bulk shipments should be allowed, commercial chemists may discover a method by which the

compound in bulk may be refilled into cans for retail sales within the limits of a State, and thus the whole object of the legislation might be frustrated.

Effect on the Public Health

In recent years scientists have discovered food elements known as "vitamins" which are highly essential to the growth and well-being of the human body. It has been found that such diseases as rickets, scurvy, serious eye diseases, beriberi, and even tuberculosis, may be traced to the lack of vitamines in the diet; in fact, the lack of vitamines reduces the whole vitality of the body and invites disease. Our chief source of the vitamines is milk, and the vitamines are found almost wholly in the butterfat of the milk. Four distinct kinds of vitamines have been discovered. The extraction of the butterfat from the milk seems to leave in the skimmed milk only a trace of so-[fol. 629] called Vitamine A. The experiments of such experts as Doctor McCollum, of Johns Hopkins University, and Doctor Hart, of the University of Wisconsin, show in the striking way the lack of vitamins in the diet. It has been found, for instance, that rats fed on a ration consisting of 60 percent oats, 1 percent salt, 1½ percent lime, 15 percent dextrin, 22.5 percent evaporated milk, grew in a natural and healthy way, whereas rats fed on the same diet, substituting filled milk for the evaporated milk, grew in the same time to but half the size, had body deformities, contracted a fatal eye disease and died within about 50 days after the experiment began.

Vitamines are not produced by the cow, but are found in her food and concentrated in the milk. The human body does not produce them, but must receive them in the food. It follows, therefore, that a nursing mother who does not receive sufficient vitamines in her diet can not transmit healthful milk to her offspring. It is a curious fact that all vegetable oils and fats are wholly lacking in vitamines. It is a fact that there is in the United States considerable undernourishment of the population, especially in our larger cities. This would appear to be due in part at least to the fact that in our preparation of food for the market we have extracted at least in part valuable mineral elements and vitamines. It is therefore all the more necessary that we supply the vitamines in the milk. Milk is the one chief

food of the Nation, and no adulteration of it or substitution for it should be permitted.

While there are now over a dozen brands of filled milk in the market, only one manufacturer has attempted to restrict the sale of the compound for certain uses. Your committee is of the opinion that it is impossible to pre- [fol. 621] vent fraudulent use and sale of this compound, on account of the incentive of additional profit held out to the retail dealers, and no doubt in many cases due to the fact that the retailers themselves do not know wherein the compound differs from the genuine evaporated milk. The Hebe Co. does label its cans to the effect that the contents should not be used for infant feeding, but your committee is informed that mothers have written the company informing it that they had been feeding infants on "Hebe". The manufacturers of "Hebe" recommend their product for use in cocoa, soups, gravies, bread, etc., but it is evident that when children are so fed in place of with milk the consumer fails to receive the proper elements of nutrition.

Your committee has provided for an exception in case of compounds designed wholly for the feeding of infants. The exception is carefully worded so that under it filled milk can not be shipped in interstate commerce. There are cases in which whole cow's milk is not acceptable to an infant, and where it has been found that compounds of skimmed milk, coconut oil, cod liver oil (rich in vitamines) and other ingredients may be more acceptable. These infant foods are in nearly every case used on the advice of a physician.

Counter Arguments

The manufacturers of filled milk were given every opportunity to establish their claims before the committee. Their chief arguments are: (1) That the proposed legislation is the result of a trade war between manufacturers of milk products; (2) that the compound is wholesome; (3) that the manufacture of it affords the farmer an addi- [fol. 622] tional market for skimmed milk; (4) that their use is a convenience and an economy to the users; (5) that the compounds are accurately labeled and sold by the manufacturers for what they are; (6) that the bill is unconstitutional.

Commenting on these claims, we wish to say:

(1) The author of the bill informed the committee that he had no benefit or detriment to any manufacturer in

mind when drawing the bill, and did not communicate with, directly or indirectly, any manufacturer of filled or evaporated milk; that his only motive was to protect the public health and the dairy industry.

(2) There is no claim that the compound in and of itself is unwholesome. If used by the consumer in limited quantities, with an exact knowledge of its deficiencies, and the ability to supply these deficiencies, there would be little harm in its use. But we fear that such a condition does not obtain in practice, and are convinced that the use of the compound, as it is and will be sold, unless protected, is injurious to the public health.

(3) The claim that an additional market is found by the manufacture of this compound for the farmer's skimmed milk is not well founded. Even if this claim could be substantiated, it would in the judgment of the committee, be no justification for its manufacture. However, the evidence shows that the skimmed milk used in filled milk should be used within an hour of the separation process. The skimmed milk coming from the average creamery and cheese factory, therefore, can not be used at a filled-milk plant on account of the delay due to transportation. Moreover, opponents of the measure were unable to demonstrate to the [fol. 623] committee any uses for the compounds which were different from or additional to the uses of whole milk. It is therefore logical to conclude that, since there is approximately an equal amount of skimmed bilk in a can of evaporated milk to that in a can of the compound, the skimmed milk consumed would be the same and the skim affords a cheap medium through which a market is found for a more expensive fat. Opponents inferred that fat was the medium used to market the skimmed milk. This, of course, was not sustained, since the value of 100 pounds of skimmed milk was shown to be from 35 to 50 cents, while the value of 4 pounds of coconut oil would be approximately 48 cents, and the value of 4 pounds of butter fat would be approximately $1.72, at the time that the hearings were held. It must be apparent that the manufacturer of the compound is seeking greater profits by the substitution of cheaper, less digestible, and inferior fats for the growth-producing butter fat. It was also demonstrated to your committee by competent witnesses that there is not

as much waste of skimmed milk as people generally imagine. In the creamery and cheese factory districts skimmed milk is generally made into cottage cheese or is sent back to the farm, where it serves a very useful purpose in supplementing live-stock rations, and it is in these districts where most of the skimmed milk is produced.

(4) As to the convenience and economy in the use: There is no purpose for which filled milk is used where evaporated or condensed milk will not do as well or better. The genuine article can be obtained in any store which carries the compound. There is no shortage of evaporated milk. As to the economy, it appears that in hundreds of stores in the country the filled milk was sold for the same price as the evaporated, sometimes even at a higher price and sometimes at a slightly lower price. Even if it is conceded [fol. 624] that the filled milk is sold cheaper, there is no economy, because the buyer at the reduced price is not getting his money's worth.

(5) The question of labeling has already been touched upon. It is impossible for the public to know what the valuable ingredients are which have been extracted from the contents, even with a thorough reading of the label.

(6) The question of constitutionality was not seriously pressed before the committee. We are thoroughly satisfied that Congress has the power to exclude from interstate and foreign commerce any article which is in the exercise of fair judgment injurious to the public health. Under the pure food and drugs act Congress has barred many drugs and foods considered below certain standards, and this bill may rightly be considered in the nature of an amendment to that act. In the *Lottery* cases (188 U. S. 321) it was held that

> It is equally within the power of Congress in regulating interstate commerce to protect the public morals as it is to protect the public health or the economic welfare of the people.
>
> Congress not only has the right to pass laws regulating legitimate commerce among the States and with foreign nations, but also has full power to bar from the channels of such commerce illicit and harmful articles. Congress may itself determine means appro-

priate to this purpose, and, so long as they do no violence to the other provisions of the Constitution, Congress is itself the judge of the means to be employed in exercising the powers conferred on it in this respect. (*McDermott v. Wisconsin*, 228 U. S. 115.)

Other cases on the subject are: *Hoke v. U. S.*, 227 U. S. 308; *Eckmann Alterative* cases, 239 U. S. 510; *Hebe Milk* case, 248 U. S. 297.

State Legislation

Eleven States now have laws either prohibiting entirely the manufacture and sale of filled milk or restricting the [fol. 625] business in such a way as to make the commercial exploitation impossible. These States are: Utah, Maryland, Florida, California, Colorado, Connecticut, Oregon, Ohio, New York, New Jersey, Wisconsin. In Ohio, Maryland, and Wisconsin the legislation has been upheld by Supreme Court decisions. The Wisconsin decision is the latest, and may be found in the hearings.

Economic Considerations

The manufacturers of filled milk frankly claim that the business is in its infancy. It is reasonable to assume that in the absence of State legislation and campaigns of education conducted in respect to the compound, its sale now would run into the hundreds of millions of pounds per year. No doubt more filled milk has been manufactured in this country than has been officially reported. It appears that during the present year a large manufacturer of evaporated milk in New York put out vast quantities of filled milk intended for domestic consumption labeled as "evaporated." Our attention has been called to a shipment of 3,000 cases of milk to New York, intended for export, labeled as "evaporated," which was found on chemical analysis in Germany, where part of it was shipped, to be "filled." Some 30 years ago our export trade in cheese was ruined by the manufacture in this country of "filled cheese," and we are in danger of having suspicion cast on our large exports of evaporated and condensed milk by what is now a comparatively small amount of filled milk. When we consider that in 1918 we exported 551,000,000 pounds of evaporated and condensed milk, of a value of $72,000,000; that in 1919 we made over two billion pounds, exported about 850,000,000

[fol. 626] pounds, of a value of $121,000,000; that in 1920 we made about a billion and a half pounds and exported over 400,000,000 pounds, of a value of $65,000,000, we can not afford to let a few manufacturers in this country for an additional profit to them strike a blow which will do irreparable injury to our entire dairying industry. Dairying represents the highest point reached in farm economy. Wherever dairying is extensively practiced, the entire community reflects its benefits.

The National Agricultural Conference called in Washington at the instance of President Harding January 23 to 27, 1922, passed resolutions couched in the following language:

> The Manufacture, sale, and use as food of compounds consisting of milk from which the butterfat has been taken and oriental vegetable oils substituted therefor, is a growing menace to the public health and threatens to undermine the dairy industry of the United States. Investigations have shown that the pure food and drugs act does not give the public the necessary protection against these compounds, and that additional Federal and State legislation is desirable. We therefore urge the enactment of a Federal law to prohibit the introduction into interstate commerce of compounds of vegetable oils and skimmed milk, or products made in the semblance of milk. We further urge the passage by the various States of additional legislation prohibiting the manufacture or sale of such imitation compounds, and close cooperation between Federal and State enforcement authorities in the detection and prosecution of violators of such laws.

Dr. William G. Geis, head of the department of biological chemistry, of the College of Physicians and Surgeons, Columbia University, New York City, when legislation for prohibiting the sale of filled milk was before the New York Legislature, made the following statement:

> [fol. 627] I am in favor of prohibiting the manufacture and sale of filled milk. There is no economic necessity in our country for this imitation and debasement of pure evaporated milk. There is a biological function of butter fat which can not be supplied by

any vegetable fat in combination with skimmed milk. The growth of their bodies, the quality of their teeth, and the health of the children depend largely upon the milk in the diet. There is no evidence of any satisfactory substitute. There is every evidence against this invasion of cheap vegetable fat.

The civilization of our country is dependent upon the dairying industry. We should do everything possible to encourage it. We need it to preserve the fertility of our soil, and the time to prohibit the filled-milk traffic is now, before it has done greater damage to our health or to one of our basic and indispensable industries.

[fol. 628] DEFENDANTS' EXHIBIT 28-B (For Identification)

Shipment of Filled Milk in Interstate Commerce

Mr. Ladd: Mr. President, I ask unanimous consent for the immediate consideration of the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce. The bill passed the House of Representatives by a large majority; there has been a hearing before the subcommittee of the Senate Committee on Agriculture; two amendments have been added, one for the purpose of clarification and the other to make sure that the bill shall not include certain other foods which were not intended to be included.

The Presiding Officer: Is there objection to the request of the Senator from North Dakota for the immediate consideration of the bill named by him?

Mr. Gerry: Mr. President, I understand the Senator from South Carolina [Mr. Dial] is desirous that the bill should not be considered during his absence.

The Presiding Officer: Does the Senator from Rhode Island object to the present consideration of the bill?

Mr. Ladd: I was not aware there was any objection on the part of the Senator from South Carolina. I knew that the Senator from Mississippi [Mr. Harrison] had stated that he reserved the right to discuss the measure and to have a vote on it in the Senate, but the Senator from Mississippi informed me that he had looked into the matter and would offer no objection. I also understood that the

Senator from Arkansas [Mr. Caraway] had some objection to the bill, but I told him that I was about to ask for its consideration and he said he was not going to bother with it, and he left about two moments ago, so I take it he has withdrawn his objection.

Mr. Gerry: I am not especially familiar with the provisions of the bill, but I have information that the Senator from South Carolina [Mr. Dial] desires to be present when it is considered and, out of courtesy to that Senator, I do not think the bill ought to be considered until he is present, especially at this late hour.

Mr. Ladd: If there is objection to the bill I will withdraw the request.

Mr. Gerry: I object to the immediate consideration of the bill in the absence of the Senator from South Carolina.

[fol. 629] Filled Milk

Mr. Ladd: Mr. President, I move that the Senate proceed to the consideration of Order of Business 963, the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce. I regret to be obliged to make this motion, but the bill has been on the calendar for some time and it has been objected to whenever it has been reached during the morning hour. On two or three occasions Senators have stated that at another time there would be no objection to taking up the bill, but there has always been some objection. However, Senators know the condition in which the business of the Senate is now, and while I regret very much to do so under those conditions, yet I feel obliged to move to take up the bill at this time.

The bill is known as the filled milk bill. Eleven States have passed such a measure, prohibiting the manufacture and sale of filled milk. Within the past few days the Legislature of the State of Washington, I am informed, has enacted a law prohibiting the manufacture and sale of filled milk within the State of Washington. Wisconsin, which is one of the largest filled-milk producing States, has also passed a law prohibiting its manufacture, and the courts have sustained the law. There is a similar measure before the Legislature of Indiana to prohibit the manufacture and sale of filled milk within the State.

The committee reports that H. R. 8086 be passed as it came from the House with two slight amendments. It is

veloped in the hearings that the bill as it passed the House might possibly be considered as affecting the sale of certain other infant foods or preparations. In order that there might be no question on this point a slight amendment was made clearly exempting these particular foods. Another slight amendment was for the purpose of clarification of the meaning; otherwise the bill is the same as it passed the House—passed the House by a vote of 256 to 40.

The bill which I have moved to take up passed the House in May, 1922, and came to the Senate. In July and August, 1922, very extensive hearings were held and the matter came up at the beginning of the present session of Congress, and early in January the bill was placed on the calendar. It was reported out of the committee without objection on the part of any of the 12 members present, and I feel that it should at this time come up and be disposed of. It has the indorsement of a large number of the leading organizations of the country.

The American Farm Bureau Federation, at their annual convention held in Chicago in November, passed the following resolution:

We urge immediate action by the United States Senate on the Voigt bill, H. R. 8086, as already passed by the House of Representatives. We would also urge that the various State farm bureaus get back of filled-milk legislation in their several States to supplement the pending national law.

Again the Farmers' National Council of Cooperative Marketing Associations, at their annual meeting, under date of December 16, 1922, passed the following resolution:

In recent years there has appeared on the market compounds, made of skimmed milk and coconut oil which look, taste, and smell like genuine evaporated whole milk and can not be readily detected from whole evaporated milk except by a chemical analysis. Some of the world's greatest authorities on nutrition have denounced those compounds as being harmful to children and generally injurious to the public health. We, therefore, urge the passage in this session of the Congress by the Senate of the House bill H. R. 8086, intended to prohibit the manufacture of such compounds within the possessions of the United States and their movements in interstate and foreign commerce.

The National Grange, in their legislative program item No. 20, have the following with regard to filled milk:

The National Grange urges the speedy passage of the Voigt bill to relieve the great dairy interests of the country from the depressing effect of the fraudulent product known as filled milk and protecting the health of the consumers, particularly the children, from this adulterated food.

I submit also copy of a letter written by Senator Cummins not only indorsing the bill but declaring in his judgment, that the same is sound constitutionally:

Des Moines, Iowa,
November 9, 1922.

Mr. W. A. Wentworth, Secretary, 704 Iowa National Bank Building, Des Moines, Iowa.

DEAR MR. WENTWORTH:

I have your letter of the 7th instant inclosing one from Professor Nelson respecting the filled milk bill now pending in Congress. Since my talk with Commissioner Clark, Mr. Barney, and yourself a few days ago I have given some attention to this subject. I am thoroughly convinced that the best interest of the people of the country will be served by prohibiting the manufacture and sale of filled milk. My only doubt with regard to the matter has been respecting the constitutionality of the bill, which forbids the transportation of this commodity from one State to another. After going carefully through the record with respect to the injurious effects of the use of filled milk, and after examining the authorities with much care, I have reached the conclusion that this bill is sound constitutionally, and therefore I shall give it my hearty support.

I return the papers that you left with me.

Yours cordially, Albert B. Cummins.

A letter from the president of the Farmers' Educational & Cooperative Union of America, Oklahoma City, Okla., under date of December 28, 1922, follows:

Senator E. Ladd, Washington, D. C.

DEAR FRIEND:

The farmers of Oklahoma are very much interested in the passage of the Voigt antifilled milk bill. I hope to hear

that this bill is making progress and that it gets a favorable report from the Senate committee.

Yours very truly, John A. Simpson, President.

The following telegram from Washington State carries the indorsement of Grays Harbor Farm Bureau, Grays Harbor Dairymen's Association, Montesano Chamber of Commerce, and Aberdeen Chamber of Commerce:

Please do your utmost to get Voigt bill (antifilled milk bill) out of Senate committee at once. This is of the greatest importance to dairying and agriculture. We are asking our Senators to support this bill.

Also, from the secretary of the State Dairymen's Association of North Dakota:

Believing our interests will be protected by passage of Voigt bill this session, urge you request Senator McKinley to sign favorable report.

The following telegram from the secretary of the Iowa Dairy Council:

Am advised delay on Voigt bill in subcommittee. You realize importance passage this bill to dairy industry and public welfare. Dairy people of Iowa whom I represent urge that you assume leadership in getting this bill out of committee and passed by Senate quickly.

[fol. 630] The following telegram from E. L. Harrison, State president of 20,000 farmers' union members of Kentucky:

May we ask your cooperation in getting immediate report out of Senate committee of Voigt antifilled milk bill? The passage of this bill is of vital importance to and will be appreciated by 20,000 farmers' union members of Kentucky.

The New York Rensselaer County Pomona send the following telegram:

Meeting Rensselaer County Pomona to-day at Hoosick unanimously insist upon prompt passage of Voigt filled milk bill; eight granges, represented by 200 members. Dairymen of entire county thoroughly aroused over delay in Senate and request your support of bill.

Telegram from the president of the Iowa State Guernsey Breeders' Association:

Feeling that the best interests of the thoroughbred breeders of dairy cattle and the milk producers can best be represented in the passage of the bill known as the Voigt filled milk bill, we earnestly request that you use your influence in getting this bill before the Senate and passed.

Telegram from Iowa Dairy Association:

Iowa dairy cattle breeders desire to see the Voigt filled milk bill prohibiting interstate movement of the product filled milk passed by Senate. Passage of bill important. We urge you do all in your power to see that bill is reported from Agricultural Committee to Senate floor.

Telegram from the Cooperative Milk Producers' Association of Dayton, Ohio:

Three thousand milk producers, members of the Miami Valley Cooperative Milk Producers' Association, urge you to support favorable report by committee on Voigt bill, H. R. 8086.

Telegram from master New York State Grange:

Passage Voigt filled milk bill at this session of Congress vital to dairy industry; dairymen New York State unanimous in demand for its immediate passage, both from standpoint of unfair competition with pure dairy products and as pure food measure in protection of health, particularly children.

Telegram from Utica Milk Local:

Our Utica Milk Local earnestly request that Voigt bill be reported out of committee. This bill will stop a flagrant, fraudulent practice in the United States, and one which does a great deal of harm and no good. It injures the foundation of one of the most important industries of the American farmer.

Telegram from Ohio State Dairy Committee:

As secretary of our State dairy committee, I am asked to request favorable action on your part on Voigt bill

(H. R. 8086) now in hands of your committee. Please notify us of your action on this bill.

The following telegram from the secretary of the Ohio Farm Bureau Federation:

Ohio Farm Bureau Federation urgently requests you to support favorable action by your committee on Voigt bill (H. R. 8086). Please let us know your stand on this bill.

Telegram from master State Grange of Seattle, Wash.:

Farmers are inquiring every day why we can not do something toward pushing enactment of Voigt milk bill. The manufacture and sale of this product is so potently based upon deception that it is hard for us to understand what reasons can be causing the delay.

Telegram from the State Dairymen's Association of Nebraska:

Nebraska Dairymen's Association urgently asks that Voigt bill be reported out at your earliest convenience.

New Jersey farmers favor filled-milk bill:

New Jersey farmers look to you for assistance in obtaining early favorable reports on the Voigt filled milk bill.

Farmers' Union of Nebraska indorse bill:

Farmers' Union of Nebraska desire that you use all honorable means to have the Voigt antifilled milk bill reported out of the Senate committee. Thank you.

Onondaga County Grange, State of New York, support bill:

As grange deputy of Onondaga County, State of New York, representing 4,500 men and women, I urge you in their behalf to support the Voigt filled milk bill. M. A. Terpening.

Milk producers organizations of Pennsylvania behind bill:

Milk producers organization of Lancaster County, Pa., request immediate favorable report committee on Voigt bill (H. R. 8086) and ask its prompt passage Senate.

Telegram from Everett, Wash.:

Dairymen vitally interested in Voigt bill now in your committee. House of Representatives passed bill by large majority, to satisfaction of dairymen; 1,500 dairymen in Snohomish County, Wash., request report on bill from your committee and expect favorable action for passage.

Maryland milk producers indorse Voigt bill:

Over 2,000 members Milk Producers' Association, Cecil County, Md., urge immediate favorable report Agricultural Committee on Voigt bill (H. R. 8086) and also its prompt passage.

Delaware Milk Producers' Association urge passage:

Our organization, representing producers of milk in the State of Delaware, urges immediate favorable report Committee on Agriculture on Voigt bill (H. R. 8086) and prompt favorable action by the Senate.

New Jersey Milk Producers' Association urge passage:

One thousand seven hundred members Milk Producers' Association, New Jersey, urge immediate favorable report Voigt bill (H. R. 8086) and also its passage Senate.

Dairymen's League Cooperative Association, Utica, N. Y., urge passage of bill:

Vital to dairy industry Voigt filled milk bill be passed at this session of Congress, in view of fact that filled milk is unfair competition with pure dairy products, also as pure food measure for protection of health, particularly children; dairymen unanimous urging bill be reported out without further delay.

Connecticut Milk Producers Association indorse bill:

The dairymen of Connecticut beg your assistance for an early and favorable report on the Voigt filled milk bill. Our industry and the consuming public both need it badly.

Allegany County farmers, New York, back bill:

The organized farmers of Allegany County ask you to use your influence to have the Ladd bill reported out at once so action can be secured this session.

New York Farm Bureau Federation indorses bill:

New York Farm Bureau Federation asks that Voigt bill be immediately reported out of committee; of great importance not alone to dairy industry but public health as well.

Six hundred Grangers want law:

Rosehill Grange, of Waterloo, N. Y., with a membership of 600, goes on record as favoring the enactment of the Voigt filled-milk bill. Your efforts in this matter will be greatly appreciated.

Five thousand Grangers, Wayne County, N. Y., want bill passed:

Five thousand Wayne County Grangers urge passage of Voigt filled-milk bill.

St. Paul, Minn., Milk Producers' Association indorses bill:

Respectfully request that you use every effort to get Voigt bill out of committee at once. Our farmers all greatly interested in this bill. Have started action for State legislation along same line and feel we must have your active support now.

Iowa creamery favors bill:

The farmers of our locality to a man are in favor of the Voigt bill. We believe for the interest of the farmers of the common West you should see that this bill passes the Senate.

Iowa State Butter Makers' Association approves bill:

The Iowa Butter Makers' Association, by their secretary, do hereby ask you to use your good influence to secure a favorable report from the subcommittee of the Committee on Agriculture now considering Voigt bill (H. R. 8086). The dairy interests of Iowa are at stake and we pray for immediate action.

The Nebraska Creamery Butter Manufacturers' Association, through its secretary, indorses the bill. The secretary of that association writes as follows:

December 19, 1922.

Hon. E. F. LADD,
Senate Office Building, Washington, D. C.

DEAR SENATOR LADD: As secretary of the Nebraska Creamery Association I am writing you pertaining to the Voigt bill which, as you know, was most favorably acted upon by the House last spring. I am sure that 95 per cent of your constituents are favorable to this measure. It is a truly constructive bill and one which the farmers of this country, as well as those who believe in pure foods, are greatly interested in. Thanking you for what you can do, I remain,

Very truly yours,

A. L. HAECKER, *Secretary.*

Mr. President, I might add some 50 other telegrams from various parts of the country which I have since received, all indorsing the filled milk bill and urging its early passage as a means of protecting the dairy interests of this country as well as the health of the babies and children, which means a stronger manhood in the years to come.

Mr. Fletcher: Mr. President, may I interrupt the Senator.

The Presiding Officer (Mr. McNary in the chair): Does the Senator from North Dakota yield to the Senator from Florida?

Mr. Ladd: I yield.

Mr. Fletcher: Not being a member of the committee, I am not advised as to what material is used to make what is called filled milk, and am not familiar with the ingredients which compose that product. I should like to inquire why they are deleterious or harmful and injurious to health? I think the bill declares filled milk is injurious to health and condemns it very strongly. I inquire what is meant by filled milk? I should like to have the Senator explain that.

Mr. Ladd: Mr. President, filled milk is a product made from skimmed milk. The butter fat is taken out of the milk, then it is replaced with coconut oil, the product pro-

duced is evaporated to the same consistency as evaporated milk, and sold very frequently under the label of evaporated milk or as milk. Filled milk is largely used as milk; it is being exported abroad as condensed or evaporated milk. It is doing exactly for our evaporated and condensed milk business what the filled cheese and the skim-milk cheese did in the eighties and nineties in this country, namely, destroying our dairy industry.

The product is injurious because the coconut oil does not contain the same constituents that are contained in the butter fat of milk, which contain what are known as vita- [fol. 631] mines, the lack of which in the filled-milk product retards growths and produces eye trouble. There are various other vitamines; some five, I think, have now been discovered; none of these are in the filled milk but one of the most important of these is found in milk. The only source from which the child may receive this vitamine is through milk. When butter fat has been removed from milk, the vitamines have been largely taken away and there has been substituted in their place a cheap oriental oil devoid of vitamines. Filled milk is, therefore, injurious to health because of the absence of the vitamines and because it has not the same nutritive constituents as has butter fat. Yet I think it is sold in most cases as milk. Here in this city, I am informed, 156 line grocery stores sold it as the same price for which they sold evaporated milk. The average person does not know that.

With regard to these vitamines, more especially the ones in whole milk, the evidence was given before both House and Senate by leading experts in this country. I am confident that there are few, if any, abler investigators in this particular field of industry than Doctor McCollum, of the Johns Hopkins University, who appeared before the committee. He said:

I say the evidence clearly indicates that there are certain vitamines in some food products, and if any of these are absent from the diet certain nutritional difficulties are bound to arise. (Senate hearings, pp. 22 to 25.)

One of these vitamines, known as vitamine A, is found associated with milk fat, and when this butter fat is removed from the milk, the skimmed milk is nearly devoid of vitamines, while vegetable oils contain none of these vitamines. Therefore this substitute vegetable oil for

butter fat in milk means to deprive the individual of this particular vitamine, and unless it is furnished from some other source nutritional difficulties are bound to arise, as experiments have indicated and the child receiving only milk will be deprived of this vitamine, which seriously affects the normal development of the individual and is particularly characteristic of eye troubles.

Doctor McCollum showed experiments where two animals, rats, were fed identically the same, as far as diet was concerned, with the exception that one received 10 per cent of its diet of whole milk powder. This animal maintained a healthy condition, while the one deprived of the milk powder was abnormal and failed to develop.

Another experiment, identically the same, with the exception that one set received a portion of filled milk while the other received an equal portion of evaporated milk. The two receiving the filled milk containing coconut oil failed to develop, and one receiving the coconut oil died after a short time, while the others remained normal.

In 1920 there was produced in the United States 85,000,000 pounds of filled milk, sold mostly in 1-pound containers. From the milk that produces this filled milk there had been extracted from 7,000,000 to 8,000,000 pounds of butter fat, and substituted in place of the same from 7,000,000 to 8,000,000 pounds of a cheap oriental oil—coconut oil—costing from 8 to 10 cents per pound, and when manufactured not to exceed in the filled milk 12 cents per pound.

This product is sold in competition with condensed or evaporated milk, wherein butter fat is costing from 40 to 45 cents per pound. The production of this amount of butter fat would mean the replacing of approximately 40,000 cows from the American dairymen. (House hearings, p. 174.) The evidence showed that the price at which filled milk is retailed is usually the same as that charged for evaporated milk. Doctor Larson, of the Bureau of Chemistry, Department of Agriculture (House hearings, p. 113), stated that there were a series of chain stores in Washington, and that the manager of 156 of these stores stated that he sells filled milk at 10 cents per can for the large cans, the same as charged for evaporated milk. (House hearings, p. 169.) It is stated that one of these filled milks in New Hampshire was retailing at 17 cents.

and that those who purchased this product—Carolene—thought they were securing full evaporated milk, and were amazed when they found it was not evaporated milk.

It was claimed (House hearings, p. 127) that while the wholesale price in most cases of this filled milk was $3.50 a case, the price of standard brands of evaporated milk was $5 a case. This means, then, that the middlemen or retailers are receiving an undue profit, or as one of the witnesses stated: "If the retailers are selling it at the same price here in Washington they are profiteering."

In this country we produce approximately 1,500,000,000 pounds of evaporated milk, and in 1926 we were producing 85,000,000 pounds of this filled milk.

In the House hearings, page 88, it developed that the cost of production entering into the manufacture of 48 cans of filled milk was: For skimmed milk 36 cents, and 45 cents for coconut oil, or a total cost for the ingredients in the 48 cans of 81 cents. That is, the contents of these cans therefore cost a little less than 2 cents per can, while the can cost approximately 1 cent each, a gain by the substitution of coconut oil. In Chicago evaporated milk in carload lots sold at $5 per case—48 cans—while filled milk sold at $3.60.

Fanciful names are placed on the labels, and at times it is sold under a trade name so as not to come in conflict with the law, while in other places it is labeled and sold as condensed or evaporated milk.

Mr. Fletcher: Is the coconut oil all imported?

Mr. Ladd: The coconut oriental oil is all imported. It displaces an equal amount of our own products. It displaces the butter fat and is injuring the dairy interests very largely. Coconut oil is produced with cheap labor in oriental countries and brought in here at from 7 to 10 cents a pound to compete with butter fat costing around 40 cents a pound. There is no opportunity for competition; there is no opportunity for the dairyman to compete with it, and unless its manufacture is prohibited in this country, the dairy industry will be largely destroyed.

Mr. Fletcher: May I ask the Senator if cottonseed oil or peanut oil are used in making so-called filled milk?

Mr. Ladd: They are not. No oils of that character can be used, because their flavor and other properties make it impossible to use them satisfactorily. There must be

used an oil that is entirely bland, so that it can not be detected in milk. Cottonseed oil would give a taste and flavor that would be objectionable.

Filled milk, therefore, is coming in competition with our dairy products. It is a cheap product that is sold just sufficiently below the price of the real milk article as to induce the public to buy it. It is not helping the people of this country, but is going to destroy the dairy interest.

Mr. Stanley: Mr. President——

The Presiding Officer: Does the Senator from North Dakota yield to the Senator from Kentucky?

Mr. Ladd: I do.

Mr. Stanley: If I correctly understand the Senator, the use of coconut oil in substitution for butter fat in the production of this commodity gives a product that is less nutritious than condensed milk made from the whole milk?

Mr. Ladd: Yes; because the coconut oil has not the same food value.

Mr. Stanley: Exactly; coconut oil has not the same nutritive qualities as has milk?

Mr. Ladd: It has not the same nutritive qualities as has milk. In the skimmed milk used as a basis there is introduced a cheap oil that has not the same nutritious and food value and which can not take the place of milk for the young growing child who depends wholly on milk for its source of food and for the vitamines so necessary for growth and health. Therefore the filled product is injurious to the public health.

Filled Milk Condemned.

In a bulletin of the Wisconsin experiment station, appearing in the Senate hearings, page 244, it is stated that—

The use of "filled" milk for infant feeding is intolerable and should be prohibited by law, since many mothers of limited means do not know the dangers of filled milk they are bound to use it when available. In the interest of public welfare, it is desirable to entirely prevent its sale and manufacture.

Doctor Alsberg, formerly head of the Bureau of Chemistry, now of the Leland Stanford University, California, in a letter dated June 3, 1921 (Senate hearings, p. 225), said:

A milk product in which the natural butter fat has been substituted wholly or in part by vegetable oil or fat such

as coconut oil does not have the same nutritive value as one in which no such substitution has been made in which there are valuable vitamines, while coconut oil contains little or none of this vitamine.

Doctor Goldberger, medical officer, United States Health, Service (Senate hearings, p. 266), speaking with regard to filled milk, says:

The reason, or probably the principal reason, why it would not serve exactly the same purpose as natural milk is that the first step of preparation of skimmed milk in removing the butter removes a certain food essential, named a vitamine, vitamine A, and the addition of the vegetable fat does not replace this element, although if replaces the fat and the calorie value; and, secondly, food so constituted is, by comparison with an equivalent amount of milk, poorer in this dietary essential of vitamine A, and it is a dietary essential that is quite important, particularly important in young children and infants whose diet is naturally a restricted one and is likely to be restricted entirely to milk, and in such instances it would be necessary to add some other source of this vitamine in order to make the diet of a child complete. Without this other addition, the nutrition of the child would be likely to suffer.

Mr. Stanley: Mr. President, will the Senator pardon a further interruption?

Mr. Ladd: Certainly.

Mr. Stanley: I thoroughly understand that filled milk, being made from coconut oil or containing coconuts oil and other ingredients, is not as nutritious as if it contained [fol. 632] butter fat; but what I was trying to get at was whether filled milk made by the use of coconut or other vegetable oils was possibly injurious as a food product.

Mr. Ladd: Doctor McCollum, of Johns Hopkins University, formerly of Wisconsin University, whom I consider in his particular field one of the ablest nutrition investigators in America, states that it is positively injurious, especially to the child.

Mr. Stanley: Is it positively injurious to people generally?

Mr. Ladd: Not to grown people, for they can get the vitamines from some other source.

Mr. Stanley: It is injurious, then, because it does not supply the food values that are essential to the child?

Mr. Ladd: That is correct.

The evidence before the Senate—page 7—shows deception in labeling. On one of these filled milks it is stated:

Nutro is prepared in rich dairying sections of Indiana and Wisconsin; is made from fresh pure cow's milk with the butter fat extracted and refined coconut oil added.

Again, they say:

Nutro is a delicious and nutritious new milk product.

In one of their advertisements they state:

It is prepared in the rich dairying districts of Wisconsin and Indiana and made of pure rich cow's milk with the animal fats extracted.

They further add:

And essential food values replaced by a refined, rich, sweet, pure, vegetable coconut oil.

Thus giving the impression that there is something in milk—the animal fat—that has been removed that may be deleterious. They further claim:

Nutro is pure, delicious, wholesome. It is prepared in model dairies from pure cow's milk, evaporated to double strength.

In the Senate hearings, page 12, it is clearly set forth that dealers keep the product on the same shelves with condensed and evaporated milk, frequently sell it at the same price, although it costs considerably less, and, according to the testimony, claim that the product is equally as good. One dealer said:

It is good. We sell more Hebe than any other; better for puddings than fresh milk; just as good as the other.

Another said:

It was certified by the board of health.

Which it is not. Another said:

I sell very much, and people give it to children.

Another said:

Of course it is good for children.

Another:

It is as good as the other; it is good for children.

Another said:

It is as good as the other, and I recommend it for children.

In the House hearings, page 168, it was stated that—

Borden's condensed milk and Hebe they charge the same as for evaporated milk—10 cents. When asked the question, "Which is better for house use?" four stores stated, "One is just as good as the other."

I will name now some of the States that prohibit the manufacture or sale of this product within the State:

New Jersey prohibits the manufacture and sale of condensed or evaporated milk to which have been added, blended, or compounded any fats or oils other than milk fats.

New York prohibits the manufacture and sale of condensed evaporated milk, and so forth, to which have been added any fats or oils other than milk fats in semblance of milk or condensed milk.

Wisconsin, Florida, Maryland, Ohio, California, Oregon, and Utah prohibit it; and, as I have said, Washington has just passed a law prohibiting it; and Washington, I believe, is the second largest State for its manufacture.

State Laws

(Senate hearings, p. 253)

New Jersey prohibits the manufacture and sale of condensed or evaporated milk to which has been added, blended, or compounded any fats or oils other than milk fats.

New York prohibits the manufacture and sale of condensed or evaporated milk, etc., to which has been added any fats or oils other than milk fats in semblance of milk or condensed milk.

Wisconsin prohibits the manufacture or sale of condensed or evaporated milk or any other derivatives of milk to which has been added any fat or oil other than milk fat.

Florida prohibits the manufacture or sale of condensed or evaporated milk which is not made of pure milk from which no part of the cream has been removed and which does not contain specified percentages of milk solids and butter fat.

Maryland laws prohibit the manufacture or sale of condensed, evaporated, or preserved milk which is not manufactured from pure milk from which no part of the cream has been removed and which does not have certain high specified percentages of milk solids and butter fat.

Ohio prohibits the manufacture or sale of condensed milk which is not made from whole milk and which does not have a solid content equivalent to 12 per cent in whole milk and a butter-fat content equivalent to 3 per cent.

California: Imitation milk is defined to be any mixture or compound made of milk, skimmed milk, or any semblance thereof to which has been added any edible oil or fat other than natural milk fat.

Oregon places substantially the same restrictions upon the manufacture and use of milk as California.

Utah essentially the same.

They recognize that while it is injurious, it is worse than that, in that it is destroying the dairy interests of the State of Washington, as it was destroying the dairy interests of the State of Wisconsin, and that in a few years they will be in the same condition as was this country with filled cheese when there was no foreign market for American cheese.

During the eighties and early nineties skimmed-milk cheese was largely made, and filled cheese came later to be a prominent feature, and these products exported abroad practically ruined the American cheese industry, so much so that American cheese of the best quality had to be shipped from Montreal as Canadian cheese in order to find a market abroad.

Filled Milk Exported

The New York Globe of last fall stated that "there were persistent rumors of filled or adulterated milk being sold at down-town districts of that city. The food department prosecuted one of the largest wholesale-grocery houses in

New York for selling that class of milk and they were fined $3,000. While innocent themselves, they had bought milk from the Rogers Milk Corporation, which also puts out a pure product, and food officials charged that the milk fat had been removed from the product and that in its place a vegetable oil had been substituted, so that the mixture consisted of a product fraudulently labeled compound or skimmed milk and foreign fat.

Another case was a shipment of 1,900 cases of condensed milk to Austria, under date of March 15, 1922, which was purchased from the Danish Pride Milk Products Co. by a company and it was labeled "This can contains pure cow's milk evaporated to a consistency of plain condensed milk and is guaranteed by the manufacturer." Examination in Austria showed it to be evaporated filled milk containing coconut oil in spite of the fact that it was labeled as "pure cow's milk evaporated." It bore the label of "Pantry Brand," but beneath these labels, in many cases, was to be found another label, "Enzo Brand."

This is not an innocent sale, for records would indicate that the product had been previously sold to another New York corporation and later rejected because it was misrepresented.

There are court records here of an instance where 1,900 cases of this milk were sold and shipped abroad to Germany, labeled as pure evaporated milk, and it was discovered after it reached Germany that it was this special product from which all the butter fat had been extracted and coconut oil had replaced it. It was then returned to this country, and those who shipped it from this country paid a heavy fine for the shipment.

In the same way, another firm in New York City was prosecuted for selling the product as pure evaporated milk when it was known to be skimmed milk to which vegetable fats had been added; and that firm paid a fine, I think, of $3,000. The commissioner of public health in New York, now elected as Senator from New York, Doctor Copeland, has taken steps to prohibit the sale of filled milk within the cities of New York and Brooklyn, and is making war against it, and is determined that it shall not be sold.

I feel that it is our duty to enact this bill into law, so that the farmers and dairymen of this country shall be protected. If Senators will examine the report that accompanies this bill, I think they will find the facts pretty fully

set forth; but at present I will not talk longer on the bill. The Senator from Ohio [Mr. Willis], I understand, desires to address the Senate in regard to it.

Mr. Willis: Mr. President, it is with very great regret that I have to say that I shall be compelled to vote against the motion made by the Senator from North Dakota.

As the Senator knows, I am very friendly to this bill. I have had a very humble part in bringing it to its present state. I believe it ought to be passed. I may say in passing that if the Senate had the rules that it ought to have to enable a majority of the Senate to transact business, there [fol. 633] is ample time for the consideration of this bill as well as of the shipping bill and other measures that ought to be acted upon before adjournment; but here is the situation which confronts us:

The shipping bill has been before the country and before the Congress for a long time. The Senator from Washington in charge of the bill has been very generous in yielding to everybody—not too generous, I think, but he has not sought to shut out other legislation. Now, however, we are approaching the close of the session. I think the country expects that the Senate will vote on the shipping bill. There are some things in it that I do not like, and there are more things that somebody else may not like, and other features that other Senators may like. At all events, it is a matter upon which the Senate ought to vote. To me it is perfectly apparent that if this bill is taken up at this time we shall probably get into such a legislative jam that neither bill will be voted upon.

For that reason, Mr. President, without going into a detailed discussion of the bill, I wish to state that I am in favor of the bill which the Senator from North Dakota seeks to bring up. I believe it is justified on the same basis on which we have passed the pure food laws, and that we will, if we get to a vote, pass the truth in fabrics bill, that the people are entitled to know what it is that they are buying; but I very much fear that if we bring up the bill we will not get to a final vote on it, and certainly we will not get to a final vote on the shipping bill. For that reason I shall feel compelled to vote against the motion made by my friend from North Dakota.

Mr. Jones of Washington: Mr. President, I am in favor of the bill that the Senator from North Dakota has moved

to take up. I feel satisfied that we have an abundance of time to pass the bill after the shipping bill is disposed of. There is no reason in the world why the Senate at this session should not vote upon these various measures. If this motion prevails, those who are opposed to the filled milk bill—and I understand that there are quite a number of Senators who are opposed to it—will feel justified, of course, in taking up a great deal of time, not in a way to delay that bill, but, of course, to delay the shipping bill.

As the Senator from North Dakota says, I have tried to arrange matters so that this bill could be taken up. I had hoped that the morning hour last Saturday could have been given to this bill. I understood that that would be done, but it was not done.

Mr. Curtis: Mr. President, is it not true that the Senator offered to give an hour and a half this morning to the consideration of this bill?

Mr. Jones of Washington: Yes; I offered to give an hour and a half to its consideration.

Now, Mr. President, I move to lay on the table the motion of the Senator from North Dakota; and pending that I suggest the absence of a quorum.

The Presiding Officer: The Secretary will call the roll.

The roll was called, and the following Senators answered to their names:

Ball	Edge
Bayard	Ernst
Borah	Fernald
Brookhart	Fletcher
Broussard	France
Bursum	Frelinghuysen
Calder	George
Cameron	Glass
Capper	Gooding
Caraway	Hale
Colt	Harreld
Couzens	Harris
Culberson	Harrison
Cummins	Heflin
Curtis	Hitchcock
Dial	Johnson
Dillingham	Jones, N. Mex.

Jones, Wash.	Poindexter
Kellogg	Ransdell
Keyes	Reed, Mo.
King	Reed, Pa.
Ladd	Robinson
La Follette	Sheppard
Lenroot	Shields
Lodge	Shortridge
McCormick	Smith
McCumber	Smoot
McKellar	Spencer
McKinley	Stanfield
McLean	Stanley
McNary	Sterling
Moses	Sutherland
Nelson	Swanson
New	Townsend
Nicholson	Trammell
Norbeck	Underwood
Norris	Wadsworth
Oddie	Walsh, Mass.
Overman	Walsh, Mont.
Owen	Warren
Page	Watson
Pepper	Weller
Phipps	Willis
Pittman	

The Presiding Officer: Eighty-seven Senators having answered to their names, there is a quorum present.

Mr. Jones of Washington: Mr. President, I ask for the yeas and nays on the motion.

The yeas and nays were ordered.

The Presiding Officer: The question is upon the motion of the Senator from Washington [Mr. Jones] to lay on the table the motion made by the Senator from North Dakota [Mr. Ladd] to take up for consideration H. R. 8086, known as the filled milk bill. The yeas and nays have been ordered.

Mr. Frelinghuysen: Mr. President, I want to state my position——

Mr. Jones of Washington: The question is not debatable.

The Presiding Officer: The Secretary will call the roll.

Mr. Harrison: Mr. President, a parliamentary inquiry.

The Presiding Officer: The Senator will state his inquiry.

Mr. Harrison: Is it in order at this time to request the Senator from Washington not to object to Senators discussing the merits of these two bills?

Mr. Jones of Washington: I ask for the regular order.

The Presiding Officer: The regular order has been called for. The Secretary will call the roll.

The yeas and nays were taken.

Mr. Curtis: I desire to announce that the Senator from West Virginia [Mr. Elkins] is paired with the Senator from North Carolina [Mr. Simmons].

Mr. Watson (after having voted in the affirmative). I transfer my pair with the senior Senator from Mississippi [Mr. Williams] to the senior Senator from Connecticut [Mr. Brandegee] and permit my vote to stand.

Mr. Willis (after having voted in the affirmative). I am paired with my colleague [Mr. Pomerene], and not knowing how he would vote, in his absence I will be compelled to withdraw my vote.

The result was announced—yeas 42, nays 44, as follows:

YEAS—42

Ball	Lodge
Broussard	McCumber
Calder	McKinley
Colt	McLean
Cummins	Moses
Curtis	Nelson
Dial	New
Dillingham	Oddie
Edge	Page
Ernst	Pepper
Fernald	Phipps
Frelinghuysen	Poindexter
Hale	Ransdell
Harreld	Reed, Pa.
Johnson	Shortridge
Jones, Wash.	Smoot
Kellogg	Spencer
Keyes	Townsend
Lenroot	Underwood

YEAS—42—Continued

Wadsworth	Watson
Warren	Weller

NAYS—44

Bayard	McCormick
Borah	McKellar
Brookhart	McNary
Bursum	Nicholson
Cameron	Norbeck
Capper	Norris
Caraway	Overman
Couzens	Owen
Culberson	Pittman
Fletcher	Reed, Mo.
France	Robinson
George	Sheppard
Glass	Shields
Gooding	Smith
Harris	Stanfield
Harrison	Stanley
Heflin	Sterling
Hitchcock	Sutherland
Jones, N. Mex.	Swanson
King	Trammell
Ladd	Walsh, Mass.
La Follette	Walsh, Mont.

NOT VOTING—10

Ashurst	Myers
Brandegee	Pomerene
Elkins	Simmons
Gerry	Williams
Kendrick	Willis

So the Senate refused to lay Mr. Ladd's motion on the table.

Mr. Owen obtained the floor.

Mr. Underwood: Mr. President, I ask the Senator from Oklahoma to yield to me for a moment or two to say something in regard to the motion just voted on.

Mr. Owen: I yield.

Mr. Underwood: Mr. President, I want to make a statement in regard to the vote I have just cast. The question being on a motion to lay on the table, of course I had no opportunity to say a word before the vote was taken. I want to let the Record show what I know we already know, that the vote on the filled milk bill was merely an incident in connection with the action of the Senate. The real issue was the displacing of the shipping bill.

I am opposed to the shipping bill, and I am opposed to the filled milk bill. I think they are both bad bills, and both based on the same principle. The purpose of one is to give a subsidy out of the Treasury to develop industry, and I am opposed to that in principle. The object behind the other is to use the power of legislation to destroy one industry in order that another industry may have a larger field in which to operate its business.

So, of course, when I had two bad bills before me, it was somewhat difficult for me to determine what to do; but realizing, of course, that if the filled milk bill got the right of way it would pass, notwithstanding my objection, I voted in favor of the motion to lay on the table.

I think the line of legislation involved in this filled milk bill is bad. It is nothing new with me. From the beginning of my service in Congress—for 20 years—I have voted against oleomargarine bills, not that I did not want regulation, but because I believed such legislation was an effort to tax one food product out of existence in order that another food product might have a wider market. I believed that the tax and the impediments laid on oleomargarine were discriminations against the poor man's food in favor [fol. 634] of those who could pay higher prices, and, oleomargarine being a pure-food product, I have never seen why the poor man, who has not the opportunity and the money to buy Elgin butter, should not be allowed to buy the next best thing he could get, untaxed and colored to suit his palate. I regard this pending filled milk bill as exactly in that category.

If it was deleterious to life or health, the laws which are now on the statute books would prevent its sale. Of course I know it is not as good a food product as butter, but a great many people can not buy butter and they can buy skimmed milk mixed with vegetable oil, which to some extent satisfies their palate. Apparently it is not deleterious to health and the proof of that is that it is not excluded. If it was dele-

terious to health, the present laws would exclude it. If it is not, I am not going to vote for a class of bills that would lay an embargo on what the very poor of the country have got to eat. That is the reason why I am opposed to the bill.

On the other hand, I want to say this about the shipping bill: I have never voted for a subsidy of any kind. I have never voted for a protective tariff on any article. I have never voted for any other subsidy in that class of legislation and I do not believe in it. I am opposed to the present shipping bill for that reason, although I should be very much delighted if the great shipping of the country could be developed and made to function along legislative lines for which I could afford to vote.

But I am opposed to the defeat of the shipping bill by indirection. There are certain great principles that may be involved in votes in the Senate where human rights and human liberty and fundamental principles of our Government are at stake when I would not hesitate for a moment to use any legislative power I possess to prevent the passage of a bill. But when it comes down merely to a question of dollars, when it is purely an economic question, I think the majority have a right to register their position. Last summer I was very much opposed to the tariff bill. I thought it was a radically bad bill, but after we had properly presented our position to the country and allowed the country to know our position in the matter, we allowed the majority party to pass the bill.

It could have been held here without any question until this good hour if we had desired to filibuster it to death, but it was an economic measure, and, in my opinion, the majority had the right to determine what the country should do.

Let me say to the majority now, however, that if you pass the shipping bill it will come back to your door within a week after you have passed it. I do not believe it will function. I do not believe it will produce the result you expect. I believe it will be a disappointment to the country. I believe it is fundamentally wrong. But being a purely economic question, so far as I am concerned, I am willing to let you vote on it. Of course, I represent nobody in this statement except myself, as is shown by the vote which has just been cast, but I want the Record to show my position. When the shipping bill has had a reasonable discussion, I

am willing to take a vote on it. I think it will be a mistake to pass it, but the majority have the right to register the result of their conclusions, because they are a majority of the Congress. I think you have had a reaction against your own measure by your own people to-day, and that you will have the same reaction if you pass the shipping bill, but I think the way to find out is to give an opportunity for a vote after reasonable debate, and if you can then command a majority you are entitled to have the will of the majority placed on the statute books. Therefore I voted as I did a moment ago.

I thank the Senator from Oklahoma for his courtesy in allowing me to make the statement.

[fol. 635] Mr. Brookhart: Mr. President, on Saturday last I gave notice that to-day I would speak upon the question of the power of the Supreme Court to set aside acts of Congress. Since then the Senate has refused to lay upon the table the motion to proceed to the consideration of the filled milk bill. I believe this is a very important matter to the country and one that should be immediately considered. I therefore wish to state that I shall not at this time discuss the matter in reference to the Congress and the Supreme Court, and I shall speak only briefly in favor of the motion to proceed to the consideration of the filled milk bill.

So far as the question of the ship subsidy bill is concerned I think I have made my position clear heretofore. My position is that it should not be voted upon by this Congress. It is fastening upon the country a policy by contract for 15 years when this Congress will now live less than two weeks. If it is such an important proposition to the people of the whole country, it should be considered by an extra session of the Congress elected largely upon that issue. I therefore feel that it is wrong for a Congress which is dying to fix a future policy of that kind upon the people of the United States.

In that judgment I am supported by the Senate in its vote taken but a few days ago upon the submission of a constitutional amendment providing for changing the date of the convening of Congress. Most of the Senators who are supporting the ship-subsidy measure voted at that time to submit a constitutional amendment to the legislatures of the States which will prevent the situation under which we are now laboring. I call upon those Senators to practice a little

bit what they preach. Let us postpone the vote upon the ship subsidy and take up and consider and dispose of important matters which the people of the country are demanding. The question of filled milk is one of them. It is a question of pure food. It is a question of the lives of children. It is a question of advancing our civilization.

I realize that whenever we attempt that sort of thing we always find somebody opposed. There is always some vested interest that is opposed, but nevertheless that is no reason why the Senate or the Congress should halt in carrying out and doing those things. Therefore, I feel keenly that we should proceed to the consideration of the filled milk bill and dispose of it. While I feel just as keenly that it is my duty to do everything I can by preventing a vote or otherwise to block the passage of the ship subsidy bill, I am just as strongly in favor of disposing of these other matters of interest to the whole people of the United States. I am glad to say that the Senate has voted against tabling the motion, and I hope upon a full consideration of the matter they will vote to proceed to consider the filled milk bill and that it will be disposed of in regular order. It certainly will be done without any filibuster or delay upon my part, as I believe will be the case upon the part of any of those opposed to the ship subsidy measure. I believe any other legislation of immediate importance would receive the same consideration. Therefore, I desire to say that I shall support the motion of the Senator from North Dakota to proceed to the consideration of the filled milk bill.

Mr. King: Mr. President, before the Senator resumes his seat I would like to ask him a question, if he will yield for that purpose.

Mr. Brookhart: I yield.

Mr. King: If he will permit me to make a very brief statement preliminary to it, I shall be very glad. I think his answer to the question which I am about to propound may influence some Senators in their votes upon the proposition to take up the filled-milk measure for consideration.

The Senator is a lawyer and a student of public questions. He knows our Constitution and the dual form of government which prevails. He knows the rights of the States, and under the Constitution he knows they have certain police powers and certain rights which a sovereign State has the right to exercise.

There is a grave feeling upon the part of some who are profoundly in sympathy with the purpose and object of the bill that it is an infringement upon the rights of the States and will be a direct assault upon their police powers, upon the authority of the States to regulate matters which are essentially domestic in character and, under the usually accepted theory of the rights of the States, matters which pertinently and properly belong to the States.

I want to ask the Senator if he interprets the bill in the way that it would, if enacted into law, be a serious or any restriction upon the rights of the States? Does he interpret it as a precedent that might be invoked when assaults may be made upon the States to restrict their power and in the interest of some particular business? To illustrate what I mean, there are some farmers, perhaps, and some people engaged in the dairy business who would like to see the use of cottonseed oil, as an illustration, interdicted as a food product. Let it be used for the making of soap or for any nonedible purpose. Doubtless there are some who would be willing to support a measure that would prevent the use of cottonseed oil or coconut oil in the manufacture of butter or products for use as food.

Does the Senator distinguish this bill from a measure which would have in view the object which I have just indicated? Does the Senator think that the Federal Government has the power to say that skimmed milk shall not be used for food purposes; and if he thinks that they have the power, where does he draw the line as to the authority of the States and the authority of the Federal Government to determine questions which heretofore have generally been conceded at least to be within the province of the States themselves?

[fols. 636-638] Mr. Brookhart: I think both those things never can happen, but, as I have said, I expected to discuss that question to-day. I desire, however, to postpone the discussion of that question in case the filled-milk bill is taken up, so it may be considered upon its merits. Then, more at length, I shall discuss the proposition presented by the Senator from Kentucky.

Mr. Stanley: Mr. President, I hesitate to take up so much of the Senator's time, but I will say to him, as illustrating this very proposition, elaborately discussed by Mr. Justice Marshall in the great case of Gibbons against Ogden, two

things induced the convention called together for the purpose of curing certain defects in the Articles of Confederation in a way to write their own instructions and to depart upon a venture not contemplated by those who sent them as delegates to that convention, for I think it will be universally conceded that when the delegates went to the so-called Constitutional Convention there was no thought in the minds of those who selected them that they would write an instrument new and entirely different, infinitely beyond the old Articles of Confederation in the form and character and power and genius of the Government they created. The two things above all others that induced them to this radical departure were, first, the inability under the Articles of Confederation to levy an effective tax in order to maintain the Government, and the other the utter chaos that would necessarily have resulted by a failure to vest in the Federal Government the regulation of interstate commerce. So that two compelling and convincing reasons for the conduct of the whole convention were to settle the method of taxation and to limit and definitely to define the power of Congress over commerce between the States. An impost duty levied in one State against another meant that the industrial progress of the Nation as a whole was impossible. If there is one power above all others that that convention was inclined to vest in its entirety in Congress, it was the power over interstate commerce.

How far did they go? They gave to the Federal Government and denied to the States control over commerce among the States and with foreign nations, and subsequently in Territories under the control of the Federal Government. Had they attempted to give to the Federal Government control over traffic between two points in the same State, the Constitution would never have been adopted, in my opinion, and should not have been adopted with that sort of provision in it.

I am at this time utterly opposed to an insidious propaganda on the part of the great carriers of the country, with which I am sure the Senator from Iowa is familiar, because he has added much to the literature and to the light upon that subject. I am opposed to taking away from State railroad commissions the control over strictly intrastate commerce, and I think the Senator from Iowa agrees with me on that proposition.

Mr. Brookhart: I am in the most perfect accord with that idea.

Mr. Stanley: This bill, as I read it, does that. If it does that, the Senator must concur that it is unconstitutional. The definition of interstate commerce as contained in the bill is not the definition of the Constitution; it not the definition of the Sherman Act. It is either a reckless and inadvertent or an utterly indefensible method insidiously to extend the power of the Federal Government to commerce in the commodity covered by the bill between two adjoining hamlets not a mile apart.

Mr. Brookhart: If that be true, as the Senator says, I should say that the bill should be amended at this time. However, again I call the Senator's attention to the fact that it was not my purpose to discuss the merits of the bill, but merely to discuss the question whether we should proceed to its consideration.

Mr. Stanley: Mr. President, for instance, the bill defines the term "person," and then on the first page of the bill, beginning in line 6, defines interstate commerce as follows:

(b) The term "interstate or foreign commerce" means commerce (1) between any State, Territory, or possession, or the District of Columbia, and any place outside thereof.

There is no particular objection to that. Then this provision follows:

(2) Between points with the same State, Territory, or possession, or within the District of Columbia, but through any place outside thereof.

Whenever we attempt to define the term "interstate commerce" to mean commerce between points within the same State, then we are clearly beyond the province of the Constitution.

Mr. Brookhart: The provision as read seems to contemplate a movement into some other State and then back into the original State of shipment. That might make a difference. I think however, the Senator and I would not have any serious quarrel or trouble in regard to that proposition. That is a minor matter, I think, in the bill, and, so far as I am personally concerned, I should not object to an amendment that would entirely clarify its meaning in that respect.

Mr. Stanley: Mr. President, I will ask the Senator another question. Does the Senator believe—and when the oleomargarine bill was under consideration we had this question under discussion—in a matter of this vital importance, unless we are clearly convinced that the bill is within the purview of the Constitution and that it is properly and carefully drawn, and it is not only designed for a good purpose but is the proper method of attaining a desirable end, that it ought to be taken up for consideration in the closing days of the session?

Mr. Brookhart: I think that the action of the committee is quite a good guaranty that all matters in connection with the bill have been considered, and therefore I am ready to act upon it. In matters of this kind we will always have to rely to a great extent upon the action of the Members of the Senate, including the committee which considered the measure. Each Senator can not investigate every question in all its details to the very bottom.

Mr. Fletcher: Mr. President, may I suggest to the Senator that I have before me here what are called Filled Milk Hearings Before the Committee on Agriculture of the House, June 13, July 6, 7, 19, and 20, 1921. So the matter has been before Congress for some time and the hearings are quite extensive.

Mr. Brookhart: The Senator, of course, is more familiar with that than I. I think we could well enough proceed to the consideration of the bill at this time.

[fol. 639] Mr. Dial: Mr. President, when the motion to table the filled milk bill was called up I was pretty busily engaged at my lunch, and came up, and was told that it was a preliminary fight between the filled milk bill and the shipping bill, so I voted without thinking or caring very much about it.

I was reminded of a remark that was made by a hard-shell Baptist preacher in my State many years ago. Some 35 years ago there was a good deal of antipathy in the country against lawyers running for office. In my county there were two lawyer candidates for the State senate. A hard-shell Baptist preacher went to the booth, picked up a ballot, looked at it, saw these two names on it, marked across both, and wrote at the bottom: "Neither one fits."

Mr. Caraway: Mr. President, does the Senator think he was right about it?

Mr. Dial: Perhaps so, but I doubt it. So, Mr. President, I did not see any choice between these two bills, and I voted and returned to my lunch.

So far as filibustering is concerned, Mr. President, I think probably the best thing Congress could do would be to wind up some matters of importance and adjourn without passing the shipping bill, the filled milk bill, or any other of these abominations that we have on the calendar here. I think it would do the country a great service.

Mr. President, I do not know how the Senate is going to vote on taking up the filled milk bill; but, to my mind, there is about as little excuse for that kind of legislation as there can possibly be. It seems to me that the Congress has lost its sense of proportion, and that we are dabbling in all kinds of affairs to discourage business, to increase officials, to multiply expenses, and to put burdens upon the people of this country. I was informed that this bill was on the wrong lines, and I took a little time to look into it. It is unconstitutional. It is simply a fight between some big milk concerns and undertakes to outlaw some legal enterprises.

Anyone who reads the bill itself can see that there is no necessity whatever for it. Then if he will read the statement of the author of the bill, on page 5 of the hearings, he will see that there is no fraud practiced. The compounds are not labeled "milk" but they are called by different names, and the contents of those compounds are perfectly healthful and nutritious, and there is no occasion for passing this bill. The pure food law covers everything that is necessary along this line. This makes a cheaper compound than regular milk preparations for the use of poor people who want to use it, and there is no deception whatever about it. The packages are not marked "milk." They are marked "Hebe" and "Nutro," and different names.

Mr. President, under this bill it is intended to arrest citizens of this country, try them in court, and impose on them a fine of $1,000, I believe, for endeavoring to make a perfectly legitimate compound to be sold to the people of this country. If it were sold under some deceptive name or a misleading label, then there would be some excuse for it; but these people do not do that at all. They simply make a compound that can be sold cheaper than milk.

People come here and talk about passing laws for the protection of the health of babies and ignorant people. That argument has been worn threadbare. They say that some of these compounds are not good for infants. I do not suppose beef-steak is good for an infant. Many other things are not good for it until it gets to the proper age to digest them; and if Senators will go to the trouble to read the statement of the author of the bill in the House they will see that he says there is no deception, that the label on this product does not mislead, but, for fear that ignorant people will buy it when they ought to buy something else, he thinks this bill ought to pass. There is no virtue in an argument of that sort, and no logic in it.

I was very much impressed with the various telegrams received by the Senator from Illinois [Mr. McKinley], which will be found, beginning on page 62 of the hearings. I will read just a few of those telegrams. As I said before, this seems to be a fight between different manufacturers, and it is not the part of a legislature to take sides in such a matter. We should legislate on general principles.

The first telegram, on page 62, is as follows:

Chautauqua, N. Y., July 1, 1922.

Senator Wm. McKinley, Senate Chamber, Washington, D. C.:

The manufacture of milk compounds assures the conservation for human consumption of millions of pounds of skimmed milk used for feeding animals or thrown away. Adroit appeals to the mother love of women in an effort to secure their support of the Voigt bill should be discountenanced.

Kate Wood Ray, Chicago, Member Women's Allied Drug Club.

This lady says that this skimmed milk is either fed to animals or thrown away; and yet these people manufacture it and put it in shape to be sold more economically than some other compounds of milk, and it is truly labeled. I am, of course, against fraud in any form, but this does not undertake to perpetrate a fraud. In fact, it refutes any idea of perpetrating a fraud upon the people.

The next telegram is as follows:

Chautauqua, N. Y., June 30, 1922—5.20 p. m.

Senator McKinley, Senate Chamber, Washington, D. C.:

The trade war against skim-milk compounds has been carried into Congress. I object to such legislation as will permit our Representatives at Washington to be used in furthering such a war; therefore I ask that you use your influence to defeat the Voigt bill.

Mrs. John Milloy, Elmhurst, Ill.

The next telegram reads:

Chautauqua, N. Y., June 30, 1922—8.23 p. m.

Senator Wm. McKinley, Senate Chamber, Washington, D. C.:

The Voigt bill is an unwarranted interference with business, and if enacted into law would deprive hundreds of families of a nutritious, wholesome, and economical food product.

Grace Viall Gray, President University of Chicago Cooperative Nursery.

Another telegram:

Chautauqua, N. Y., June 30, 1922.

Senator McKinley, Senate Chamber, Washington, D. C.:

As a home economic teacher I am opposed to the Voigt bill. A vote for the Voigt bill is a vote against the home. It would drive from the market a wholesome and nutritious food and deprive housewives of an excellent cooking medium.

Rhoda Viall, Manteno, Ill.

[fol. 640] Mr. President, I presume the women of this country know about as well what is good to cook as these advocates who come here and try to outlaw this product people who have a selfish purpose to serve.

On page 63 there is another telegram from Chautauqua, N. Y.:

Chautauqua, N. Y., June 30, 1922.

Senator McKinley, Senate Chamber, Washington, D. C.:

Bakers and candy makers can buy skimmed milk, so why deprive the housewife of the use of this economical

and valuable food? Skimmed milk with vegetable fat has the approval of health authorities. The Voigt bill would legislate these preparations off the markets. Defeat the Voigt bill.

Mrs. Olto Heper, Elmhurst, Ill.

Another telegram from Chicago, Ill.:

Chicago, Ill., July 3, 1922.

Hon. Wm. McKinley, Senate Chamber, Washington, D. C.:

After a meeting here to-day in which the Voigt bill was discussed I am convinced that this legislation is inspired by wholly selfish motives and should not be permitted to become a law. As my Senator I urge you to use your influence for its defeat.

Mrs. Theresa Burchy, Chicago.

Mr. President, there are various other telegrams here which I ask to have inserted in the Record as a part of my remarks, without reading.

The Presiding Officer (Mr. Oddie in the chair): Without objection, it is so ordered.

The telegrams are as follows:

Chautauqua, N. Y., June 30, 1922.

Senator McKinley, Senate Chamber, Washington, D. C.:

I am opposed to the Voigt bill, because I believe it to be a trick to eliminate competition. Scientific and medical men of highest repute have stated such foods to be wholesome and nutritious and an important addition to the food supply of the United States. Housewives are vitally interested in any wholesome food product that tends to lower the cost of living. As my representative I urge you to defeat the Voigt bill.

Marion H. Biel, Legislative Chairman Chicago Federation Women's Club.

Chautauqua, N. Y., July 1, 1922.

Senator McKinley, Senate Chamber, Washington, D. C.:

With the trade war so plainly evident behind the Voigt bill public health has nothing to do, but when they use public health as a smoke screen it should be repudiated

An edible fat added to skimmed milk and properly labeled is an economical addition to our food supply and not deleterious to health.

Eva M. Wilson, Chairman Public Health Illinois Federation of Women's Clubs.

Chicago, Ill., July 3, 1922.

Hon. Wm. McKinley, Senate Chamber, Washington, D. C.:

Knowing you desire in legislative matters to get the angle of the people back home, I wish to enter my protest against the passage of the Voigt bill. Economy in the household demands a place on the market for the milk compounds.

Mrs. Blanch R. Tayes, Chicago, Ill.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

The passage of the Voigt bill would establish a far reaching and insidious precedent that would interfere with business and be to the disadvantage of the home maker. As one of your constituents, devoted to assisting the housewife in solving her problems in selection of foods and expenditure of income, I respectfully urge you to vote against the Voigt bill.

Jean Prescott Adams, Delegate, National Convention General Federation of Women's Clubs.

Chicago, Ill., July 5, 1922.

Senator William McKinley, Senate Chamber, Washington, D. C.:

Chicago housewives favor milk compound for cooking and baking. Would consider it a calamity to have this economical product debarred from trade by passage of Voigt filled milk bill. Urge you report it unfavorably and use your influence for its defeat.

Dora Earle, Chicago, Ill.

Chicago, Ill., July 3, 1922.

Hon. Wm. McKinley, Senate Chamber, Washington, D. C.:

In the interests of the poor we should not force legislation which would debar from the market economical foods

like milk compounds which are not injurious to health. Therefore I ask you to use your influence to defeat the Voigt bill.

Minnie Starr Goodwin, Past President Illinois Federation of Women's Clubs.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

Present legislation against milk compounds is without justification from public health standpoint. I urge you to vote against the Voigt bill.

Eva M. Wilson, Chairman Public Health, Illinois Federation of Women's Clubs.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

The combination of skim milk and vegetable fat can be put upon the market at a much lower cost than can whole milk properly labeled. It is a useful and highly nutritious food. I am opposed to the present trade war which would legislate such combinations off the market. For these reasons I ask you as my representative at Washington to oppose the Voigt bill.

Mrs. John Milloy, Elmhurst, Ill.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

I am opposed to the Voigt bill. If the interests back of the Voigt bill are truly concerned about the health of infants why not substitute a bill making it a penal offense for anyone to manufacture anything that would be deleterious to the health of infants and children and not try to eliminate competition by hiding behind the guise of public health?

Marion H. Biel, Legislative Chairman Chicago Federation Woman's Clubs.

Chautauqua, N. Y., June 30, 1922.

Senator McCormick, Senate Chamber, Washington, D. C.:

Milk compounds have never been proved and never can be proved deleterious to health, so I urge you to use all the influence possible to defeat the Voigt bill. It is an interference with business that should not be tolerated.

Rhoda Viall, Home Economics Teachers, Manteno, Ill.

Chautauqua, N. Y., June 30, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

Urge defeat of Voigt bill. Am convinced its proponents are actuated by purely selfish motives. The elimination of competition pseudo and not real philanthropy is behind their contention that skimmed milk compounds are fed to babies and constitutes a menace to health; no cases substantiate this claim.

Kate Wood Ray, Chicago Member Women's Allied Drug Club.

Senator Medill McCormick, Washington, D. C.:

Skim milk with vegetable fat put upon the market in properly labeled containers has the approval of our home economics people and of the best medical authorities. The Voigt bill would legislate these products off the market; therefore I urge you to use your influence to defeat it.

Mrs. Otto Heper, Elmhurst, Ill.

Chautauqua, N. Y., July 1, 1922.

Senator Medill McCormick, Senate Chamber, Washington, D. C.:

The waste of wholesome, nutritious food material is economically unsound and keeps the cost of living higher than necessary. As Voigt bill is aimed at an industry which conserves over a million pounds of skimmed milk a year, I urge you as my Representative to work actively against it.

Leona A. Krag, Member Illinois Women's Athletic Club.

Mr. Dial: Mr. President, I notice that a great many of these telegrams, perhaps all of them, are from ladies; and they speak in about the same terms as the telegrams that

I have already read. It was surprising to me to see the great unanimity of opinion of these ladies.

Then, Mr. President, on page 72 of the hearings. I find a statement from Doctor Goehle, of Cleveland:

Senator McKinley—

Who was the chairman of the subcommittee—

Will you give your name to the reporter?

Doctor Goehle: O. L. Goehle. Mr. Chairman, I am attendant at the Cleveland City Hospital and the Lakewood Hospital and the St. Johns Hospital; and I am also attending director of the Lakewood Dispensary, and these positions give me ample opportunity to have many feeding cases under my charge. I have for the last seven and one-half years been using S. M. A., five years with Doctor Gerstenberger at the Babies' Dispensary and then two and one-half years since it has been put out for public use in Cleveland—in other words, two and one-half years in private practice and also at the dispensaries where I am officiating.

I have used it for children, infants, premature infants, even from the first day, and I have used it over long periods a good many times longer than 10 months and quite often as long as a year. So I have been able to watch the growth and development of these children under this food, and there are, I think, all told about 700 children that I have fed it to, and within the last two and one-half years I think I have had about 500 private children and about 120 of those are on my list right now. These children stand out among other children on artificial foods as especially finely developed, sturdy, well-fed children, coming close to and in a good many instances, I believe, equaling breast-fed children.

Their average of weight progress is well above the normal; their skin is soft and smooth, the tissues are firm, muscles are well developed, and their bony framework is particularly fine. I do not know of any children that have any better teeth than they, and I have been able to follow these children two or three years later, and I do not find any evidence of early decay, so that all in all the effect has been very gratifying from the medical point of view. And judging from the demand as it is made by my mothers who have either seen other mothers' babies on S. M. A. or

who have had one or two children in their family on other foodstuffs, and have had one youngster on S. M. A. and who [fols. 641-642] then have a new *body* come in, they are very much impressed with the results obtained with S. M. A.

They come in and make the demand for S. M. A. for two reasons, either because they want a baby as good as Mrs. So-and-so's, or because they wish this baby to be as good as the S. M. A. baby they have had. And then one of the biggest reasons is that they know they can not get it except on a doctor's prescription.

I have had no deleterious effects at all in the many cases I have seen, and absolutely no rickets, and this very dreaded condition which grows panic in the mother's heart, this tendency toward convulsions that so many children get on artificial feedings—I have not met this in these children I have fed S. M. A.

From the point of view of infant feeding I think it is really a God-send. It is foolproof against the attempts of mothers to meddle with the food. The universally general result has been excellent.

Mr. President, that is what a physician in charge of a hospital has to say on the subject. So it does seem to me that Congress is drifting around and going very far to hunt up subjects on which to legislate.

It will not be long before the citizens of this country will not know which way to turn. Congress will prescribe what they shall eat, what they shall wear, how they shall become heated, what they shall drink, and how they shall conduct their business, and before starting in life people will have to come to Washington and go through a universal training. Otherwise the people of this country will serve in the penitentiaries, I am afraid, for the Government will find them and confiscate all their wealth.

I very much wish Senators would look into this bill and call a halt on this kind of legislation. There are some hundred bills a little farther down on the calendar along the same line, and I think we have adopted enough bad legislation in the last couple of years, since the Republicans have been in power. The Republicans are getting terribly discouraged now, and if they keep on they will lose all hope and the next election will not have enough "pep" in it to make it amusing. We do not want to kill them off all at

once, and I want to warn them that the people will not stand much of this kind of legislation.

I believe this bill possesses somewhat fewer iniquities than does the shipping bill, possibly, in that it does not deal in such large amounts; but I would hesitate a good while before I would vote to take up either one of these bills. I might vote to take up the filled milk bill, as I would have to choose between them, but I would be doing great violence to my conscience, and I wish somebody would talk from now to the end of the session so that we would not have to go through that ordeal.

With this warning to our friends on the other side, I believe I will let them go along now, as far as I am concerned, and take a vote if they want to, but I hope legislation along the line of this filled milk bill and a few of the kindred bills which follow it on the calendar will never be put upon our statute books.

[fol. 6[illegible]] Mr. Stanley: Mr. President, during many years service in the House and Senate, I have listened with rapt attention to the weighty words of my valued friend and honored colleague. I concur always with pleasure and differ seldom, and then with a sense of profound regret and with a suspicion that after all he may be right and that I may be wrong, for I have seen his judgment tried in the school of long experience. In expressing a difference on this occasion, it will not, I am sure, be construed in any sense as a condemnation or even as an implied criticism. I am impelled, however, to say what I say now out of deference for the great leader of the minority [Mr. Underwood] upon this floor. By virtue of his exalted and well-deserved position his words have a weight those of the average Senator have not; they have a significance that the expressions of no other Senator upon this side can have.

With much that he said I do most heartily concur. I was delighted to hear him remind the Senate and remind the country that we are going headlong into a course of Federal aggression; that bills presented here, almost without exception, nibble at least at what is left of the sovereignty of the States and of the institution of local self-government. Sane and conservative men in Congress and out of it, ministers of the gospel, learned educators, thoughtful patriots everywhere are beginning to ask themselves and to ask us the question, "Whither are we tending, and where will this thing end?"

I was delighted to hear the Senator make that observation. I can not agree, however, not with what he said, but with what might be inferred from his statement. He left me under the impression that Congress is busy and deserves the commendation of the country only when this legislative mill is grinding. As long as committees are reporting bills and this side of the Chamber, like the other, is passing [fol. 644] them, then we are a good Congress; but when we put on the brakes, when we say, "Stop, look, and listen!" then we are a bad Congress; and he referred to the conduct of the lower House as an illustration of the proper method of legislation.

Mr. President, the worst thing the Senate does, the worst thing Congress does, for the country and for humanity and for whichever party is responsible for its conduct is the passage of a multiplicity of half-baked, undigested measures—not measures that are demanded by a majority of the people, not measures that are responsive to the call of the intelligent mass of the people, but measures hatched often by sinister interests or interests backed by organized propaganda posing as the voice of the people. Members of Congress pass bills not because a majority approves or requires them, but because those who make the most noise and are the best organized demand them.

Mr. Dial: Mr. President——

Mr. Stanley: I yield to the Senator from South Carolina.

Mr. Dial: I call the Senator's attention at this point to the fact that in the filled milk bill, subdivision (2), line 9, it says "between points within the same State." That certainly invades State rights. The Congress can not legislate about commerce between points within the same State. That is intrastate commerce, not interstate commerce.

Mr. Stanley: I called the attention of the Senator from Iowa [Mr. Brookhart] to that very point in the discussion of the measure.

Mr. Dial: I beg the Senator's pardon. I did not hear it.

Mr. Stanley: I am glad the Senator called attention to it again.

Mr. President, the Congress of the United States, when it is in good health and operating normally, when no stubborn minority member administers some kind of costive remedy, will pass more bills in one week than are passed in an entire legislative session by any other parliamentary

body on earth. We pass more bills, we enact more laws, in one year than the British Parliament enacts in twenty. There is no deliberative body on earth as poorly attended as this one. The Senate of the United States is the most deserted legislative chamber on the face of the earth that deserves the name of a legislative chamber; and the reason why it is deserted is because we understand that more or less here it is stage play; that the work is done in committees; that we have ceased to weigh and consider, or, as Lord Bacon says, "to chew and digest" anything.

Last night I happened to be reading, in my opinion, one of the greatest speeches ever made by the greatest orator who ever adorned this floor. Taking him all in all, in his knowledge of the law, his marvelous command of sonorous and comprehensive English, his incisive power of deduction and debate, Webster stands unique in the history of forensic oratory; and, with the sole exception of his great answer to Hayne, in my opinion the greatest speech he ever made in his discussion of the tariff act of 1824. At that time, nearly 100 years ago, he rose in his place and complained that they had brought a great tariff bill into the Congress of the United States weighed and trammeled by rules and regulations to such an extent that its sane consideration was impossible, and that he, perforce, must vote for many things in it that he regarded pernicious if there happened to be in it more things that he regarded as salutary, or he must vote against many things that he thought necessary to the welfare of his country if those good things happened to be associated with others that he thought more deleterious; that it was unworthy, even in that day, of debate in a legislative body thus to tie its hands and gag its mouth and stultify its reason for the sake of political expediency.

Mr. President, were we to borrow the policy of the House of Representatives, which has at times ceased to be a deliberative body on important matters, and install—and I am sure the Senator from Alabama upon sober consideration does not approve of such a thing—adopt a rule providing that two hours after a bill comes in it must go out, without any amendment or modification or intervening motion whatsoever; in such a case it would not be long before the Congress of the United States would be the subject of jest and of deserved contempt, and would be and should be spewed out of the mouth of a brave and intelligent people. If we are not here to consider legislation, if we are not here to

weigh it, if the only consideration that bills are to receive must be had by a few more or less interested Representatives behind closed doors in a committee, then this whole system of government is a mockery and a sham, and our assembling here an empty and hollow ceremony.

Mr. President, just the other day I went before a committee, the Judiciary Committee, to protest against the passage of a bill that had passed the House of Representatives by an overwhelming majority. One provision of that bill would send a boy in his teens to the penitentiary for five years and subject him to a $5,000 fine for giving his mother an account of a game of football if he happened to mention the odds. If he said, "The chances are 2 to 1, according to the judgment of the boys here, that he will win," it made him a felon; and there were 50 or 60 learned and reverend gentlemen there to advocate the passage of that bill. It would have excluded from the mails, it would have excluded from the news stands of the United States, the Manchester Guardian, the London Times, every great newspaper in the world; and yet we are told that we must stand here at the mouth of that cloaca of federalistic compounds as they are poured in here upon us, with our hands tied, deaf and dumb, because somebody will say we are not at work unless we are grinding out legislation.

The multiplicity of our laws to-day is the curse of our civilization. We are told of a tyrant who wrote the statutes of his country upon pillars so high that none could read. What is the difference between writing them where none can read and writing so many that none will ever be able to review or to understand them?

Fifty years ago, or thereabouts, Mark Twain on one occasion was walking down the streets of Boston. That was before the spirit of Cotton Mather moved South, more is the pity. A policeman stepped up and touched him on the shoulder and said, "Mr. Clemens, I see you are chewing tobacco. You must not chew and expectorate on the street. That is an offense." He said, "You must not spit on the street. There is a $5 fine." And he spat out his beloved quid, and walked a little farther, and lit a cigar. When he got through he threw the stub in the street, and another policeman said, "Hold on. You must not litter up the pavements, Mr. Clemens. That is against the laws of Boston. There is a $5 fine, but if you will just pay me the $5

for your appearance I will not make an arrest"; and he handed over another $5. Then he crossed the street the wrong way, and he caught it for $5 more; and he went home, and deliberately wrote that "he who has been born in Boston and has kept all its laws and ordinances need never be born again."

He who is born in these United States, and keeps the greater part of all the laws and ordinances that are made for our guidance, need never be born again. Yes, more than that; We are told, Mr. President, in Holy Writ, that above the cherubim and the seraphim, above angels and archangels in the cerulean blue and in the white light of an endless elysium, there will be spirits loftier still, the spirits of just men made perfect those who came up through great trials and tribulations: but above the martyrs and the early Christians, above cherubim and seraphim, will be that creature who, from a federally conducted birth to a federally controlled burial, kept all the laws and ordinances now enacted for our Government by the Congress of the United States.

Mr. Pomerene: Mr. President, I think that when the milk bill comes up on its merits I shall vote for it, unless some reason is urged against it which does not occur to me now. I am profoundly of the opinion that man, woman and child have a right to pure milk when they buy milk. If any reason has been urged, or can be urged, why they should not have that right, and shall not have it, I shall be glad to hear it.

I do not believe the so-called filled milk bill should be taken up now, to displace the ship subsidy bill, and when I say that, I want it distinctly understood that I can not vote for the ship subsidy bill. I feel that it will prove a snare and a delusion, and if I needed any reason to convince me of it more than another, I find the reason in the speeches which are being made on the floor of the Senate in favor of a ship subsidy. At some later day in the session, if the opportunity presents itself, I shall try to discuss that question upon its merits, but I want very briefly to-night to give my reasons for my vote against displacing it.

I recall that in the early days of this country we had the greatest merchant marine on the face of the globe, except for the British merchant marine. There was a time in the early history of our country when 90 per cent of the imports and exports came and went in American bottoms, and

notwithstanding our tremendous growth during the last century only about 10 per cent of our transoceanic commerce came and went in American bottoms.

Then the war came on and we were drawn into it, and out of the womb of necessity was born a merchant marine consisting of 1,442 steel ships. I pass by those made of wood and concrete. Now, with this great fleet of 1,442 ships, only 421 of them are in commission, and many of them are returning not with cargoes, but with ballast. That fleet cost the American people $3,000,000,000, paid out of the American Treasury.

[fol. 645] The Democratic administration was succeeded by the Republican administration, and we still have this merchant-marine fleet, without any well-defined policy with respect to it. The question is, What shall we do with it? On one side of this Chamber one view is entertained, and another view is entertained by other Senators.

Mr. Dial: Mr. President, I want to suggest to the Senator that Congress inserted a provision in the tariff bill putting a tariff on the ballast, sand, and gravel shipped back in those ships.

Mr. Pomerene: Mr. President, as I said before, I shall expect to take up that subject, and I shall discuss it more at length at some other time, but I am now trying to address myself to a discussion of the duty of Senators.

Mr. King: Mr. President, may I interrupt the Senator?

Mr. Pomerene: Certainly.

Mr. King: The Senator has challenged attention to the fact that we have more than 1,400 ships. I am sure the Senator will not take offense if I observe that Mr. Lasker stated in his testimony that approximately one-half of the ships now owned by the Shipping Board or the Emergency Fleet Corporation are good, bad, or indifferent, mostly bad. I think the majority of the evidence establishes the fact that perhaps not more than from 400 to 600 of the ships are suitable either for cargo purposes or for the transportation of passengers. So that we have spent about $3,400,000,000, and we have in the neighborhood of 400 or 500 ships.

Mr. Pomerene: In the main, the Senator is right. The total tonnage of the steel ships is about 7,000,000. As I recall Mr. Lasker's testimony, it is to the effect that about one-half of that tonnage can be sold and can be developed. As to the balance of it there is considerable doubt. But let me proceed a little further.

In December, I believe, 71 per cent of our exports were carried in foreign bottoms, only 29 per cent in American bottoms, and of that amount, 19 per cent was carried in ships belonging to the United States Shipping Board, the balance in privately owned ships.

Now, the President tells us—and I have no doubt he is right—that under Government operation of these ships during the last year we have lost $50,000,000, and that does not take into account interest on investment, depreciation of the fleet, or insurance. So that probably we are confronted with an annual loss, if we are to take into consideration interest, depreciation, and insurance, amounting to about $150,000,000.

I am not calling attention to this fact because I favor a ship subsidy. On the contrary, I am against it. But I call the Senate's attention to this fact because it must come with appealing force that it is necessary for the Congress to determine what course we shall pursue.

I think the remedy lies along the lines laid down in the Jones Act, passed in 1920. It may be that certain Senators have not made up their minds as to what course they should pursue, but I am convinced that we should not displace this bill, but should discuss it, to the end that the country can come to an enlightened conclusion as to what ought to be done, and whether there shall ultimately be a vote or not, the discussion is going to bring forth fruit. For that reason, if for no other, I shall not vote to displace the ship subsidy bill now. I think we ought to discuss it. I think we ought to discuss it upon its merits, and then come to a conclusion.

I might go on and discuss at some length the plan which is proposed in the bill and the plan which I have in mind, but I shall not do that this evening.

Mr. King: Mr. President, will the Senator yield before resuming his seat?

Mr. Pomerene: Certainly.

Mr. King: If I may recur to the first part of the Senator's observation, in which he discussed very briefly, indeed, only by inference, the filled milk bill, which it is proposed to place before the Senate for consideration, he observed that he believed that people were entitled to pure milk. Of course no one can take issue with the learned Senator on that proposition. I was wondering if the Senator felt that

it was the duty and was within the constitutional power of the Federal Government to take over that subject of legislation or whether he believed that the States were impotent to deal with the question of pure milk and whether he believed that the States should not be trusted with that responsibility. I express no opinion one way or the other, but I should be glad to get the Senator's views if he cares to submit them.

Mr. Pomerene: The Senator has made a very pertinent suggestion. I do not think the States are impotent, but I do think that the Congress may aid the States by regulating the commerce in milk between the States.

Mr. King: If the Senator will pardon me, as I understand the filled milk bill, the manufacture of filled milk is made a Federal offense. It does not content itself with the regulation of interstate commerce, which we concede is within the power of the Federal Government.

The question would naturally address itself to a lawyer as to the power of the Federal Government to deal with the matter, which it would seem, at first blush at least, was within the cognizance of the State. If the Federal Government may take up the question of dealing with milk under the guise of regulating commerce, is there any commodity with which it may not deal? I express no opinion, as I said, and I am very much in sympathy with the purposes of the bill. If I can convince myself of its constitutionality and of the wisdom of it, I shall very gladly vote for it.

Mr. Pomerene: The Senator will recall that I made the statement that I was for the bill in principle unless something developed during the course of the discussion which would persuade me that I ought not to vote for it. The point which the Senator has suggested is one that I had in mind that gave me some little concern about it.

Mr. Walsh of Montana: Mr. President, I have not had an opportunity to read carefully the hearings and so am not thoroughly familiar with what they disclose. Is there not some testimony in the record to the effect that the product is an unwholesome article of diet?

Mr. King: I have not read the testimony and know nothing about the reasons other than would appear upon the face of the bill in favor of its enactment or its presentation.

Mr. Walsh of Montana: I observe by the report of the committee that the committee stated that it is an unwholesome article of diet. Are we to understand that there is no

evidence at all in the hearings to sustain that action? I wanted to inquire what reason there is in that case to doubt the constitutionality of the measure which seems to have been raised.

Mr. King: It is quite likely, if the article be placed in the same category as, for instance, narcotics, which it is conceded are injurious, that Congress would have the power.

Mr. Walsh of Montana: Or all the articles covered by the pure food law, which has been adjudged to be constitutional.

Mr. King: The Senator, I think, will distinguish between regulation and forbidding the manufacture absolutely.

Mr. Walsh of Montana: It is not a proposition of forbidding the manufacture at all. It is forbidding the transportation.

Mr. King: I understand the bill forbids the manufacture. I am so advised, and that is the point to which I was addressing my inquiry.

Mr. Walsh of Montana: I was curious to know upon what ground anyone could question the constitutionality of it so far as it affected the transportation of the article from one State to another.

Mr. Robinson: Mr. President, may I suggest that I have heard it stated that scientists who have investigated the matter have reported that filled milk, while of less value as food than ordinary milk, is not deleterious, is not poisonous, and is not harmful, and some of them at least assert that it has a food value.

It has been stated that the question of the constitutionality of the bill arises out of the contemplated exercise by Congress of its power to regulate commerce in an effort to deny to an alleged harmless article movement in commerce.

The question is whether Congress can arbitrarily say that an article is deleterious when, as a matter of fact, scientific investigation does not disclose it to be deleterious. Could Congress, for instance, say that pure milk is deleterious and therefore shall be denied the privilege of interstate commerce? I think perhaps it would be agreed that it could not do so. So that the question arises as to whether the Congress has the power to characterize an article as deleterious which is in fact wholesome, and that question presents a good many difficulties. I think the question of fact may be important in determining the validity of legislation; that is, the question as to whether the article is in fact deleterious or is in fact wholesome.

Mr. Walsh of Montana: I find that, so far as the question of manufacture is concerned, the prohibition is in the Territorial possessions and the District of Columbia.

Mr. King: Not within the States?

Mr. Walsh of Montana: So far as the States are concerned, it is simply where interstate shipments are concerned.

Mr. King: Then it is more narrow than I supposed.

Mr. Dial: Mr. President, the testimony that I have read shows that the compound is wholesome, that it has absolutely nothing wrong about it, that it is not falsely labeled, that it is [fol. 646] nutritious. The only objection to it is that it is claimed that ignorant people use it for purposes for which it ought not to be used.

Mr. Walsh of Montana: I was aware of the fact that it is contended upon one side that it is a perfectly wholesome and nutritious article of food.

Mr. Dial: It is so contended on both sides, as the Senator will find if he will read the testimony of the author of the bill.

Mr. Walsh of Montana: If it is admitted upon both sides, that is a different matter. I admit the question of the constitutionality of the legislation might be raised in that event; but I am referring to the report of the committee on the matter, which would indicate that it is an unwholesome article of food.

Mr. Dial: I do not think that is borne out by the testimony. If the Senator would read the testimony of the author of the bill and of the first witness who was called, he would see that it is shown to be perfectly wholesome and its nature not misrepresented.

Mr. Heflin (at 6 o'clock and 5 minutes p. m.). Mr. President, there are so few Republicans here, and those who are here look so tired and worn, that I think we ought to adjourn. I move that the Senate do now adjourn.

Mr. Jones of Washington. On that I demand the yeas and nays.

The yeas and nays were ordered.

Mr. Moses and Mr. Watson suggested the absence of a quorum.

The Vice President: The Secretary will call the roll to ascertain the presence of a quorum.

The reading clerk called the roll, and the following Senators answered to their names:

Ball
Bayard
Borah
Brookhart
Broussard
Bursum
Calder
Cameron
Capper
Colt
Coutzens
Curtis
Dial
Dillingham
Edge
Ernst
Fernald
Fletcher
France
Frelinghuysen
George
Gerry
Glass
Gooding
Hale
Harreld
Harris
Harrison
Heflin
Hitchcock
Johnson
Jones, N. Mex.
Jones, Wash.
Kellogg
Keyes
King
Ladd
La Follette
Lenroot
Lodge
McCormick
McCumber
McKellar
McLean
McNary
Moses
New
Nicholson
Norbeck
Norris
Oddie
Pepper
Phipps
Pittman
Poindexter
Pomerene
Ransdell
Reed, Mo.
Reed, Pa.
Robinson
Sheppard
Shields
Shortridge
Smith
Smoot
Spencer
Stanfield
Stanley
Sterling
Sutherland
Swanson
Townsend
Trammell
Underwood
Wadsworth
Walsh, Mass.
Walsh, Mont.
Warren
Watson
Weller
Williams

The Vice President: Eighty-one Senators have answered to their names. A quorum is present. The question is on the motion of the Senator from Alabama to adjourn, on which the yeas and nays have been ordered. The Secretary will call the roll.

The reading clerk proceeded to call the roll.

Mr. Pomerene: I have a pair with my colleague, the junior Senator from Ohio [Mr. Willis], but I understand there has been some other arrangement made in reference to that pair. In view of that fact, I feel free to vote. I vote "yea."

Mr. Edge (after having voted in the negative): I have a general pair with the senior Senator from Oklahoma [Mr. Owen]. I transfer that pair to the senior Senator from Minnesota [Mr. Nelson] and allow my vote to stand.

Mr. Colt (after having voted in the negative): I transfer my general pair with the Senator from Florida [Mr. Trammell] to the senior Senator from Connecticut [Mr. Brandegee] and allow my vote to stand.

Mr. Curtis: I am requested to announce the following pairs:

The senator from West Virginia [Mr. Elkins] with the Senator from North Carolina [Mr. Simmons];

The junior Senator from Ohio [Mr. Willis] with the Senator from Colorado [Mr. Nicholson]; and

The senior Senator from Iowa [Mr. Cummins] with the Senator from North Carolina [Mr. Overman].

The result was announced—yeas 33, nays, 45, as follows:

Yeas—33

Bayard	Heflin
Borah	Hitchcock
Brookhart	Jones, N. Mex.
Capper	King
Couzens	La Follette
Dial	McKellar
Fletcher	McNary
France	Norris
George	Pittman
Glass	Pomerene
Harris	Reed, Mo.
Harrison	Robinson

Yeas—33—Continued

Sheppard	Underwood
Shields	Walsh, Mass.
Smith	Walsh, Mont.
Stanley	Williams
Swanson	

Nays—45

Ball	McCumber
Broussard	McLean
Bursum	Moses
Calder	New
Cameron	Norbeck
Colt	Oddie
Curtis	Pepper
Dillingham	Phipps
Edge	Poindexter
Ernst	Ransdell
Fernald	Reed, Pa.
Frelinghuysen	Shortridge
Gooding	Smoot
Hale	Spencer
Harreld	Stanfield
Johnson	Sterling
Jones, Wash.	Sutherland
Kellogg	Townsend
Keyes	Wadsworth
Ladd	Warren
Lenroot	Watson
Lodge	Weller
McCormick	

Not Voting—18

Ashurst	Myers
Brandegee	Nelson
Caraway	Nicholson
Culberson	Overman
Cummins	Owen
Elkins	Pittman
Gerry	Simmons
Kendrick	Trammell
McKinley	Willis

So the Senate refused to adjourn.

The Vice President: The question is on the motion of the Senator from North Dakota [Mr. Ladd].

Mr. Curtis: Question!

The Vice President: The Secretary will call the roll.

The reading clerk proceeded to call the roll, and called the name of Mr. Ashurst.

Mr. Sheppard: Mr. President——

The Vice President: The Senator from Texas.

Mr. Sheppard: Mr. President, Thursday, February 15, 1923, was the first anniversary——

Mr. Lodge: Mr. President,——

The Vice President: Does the Senator from Texas yield to the Senator from Massachusetts?

Mr. Sheppard: I shall yield when I finish the sentence.

Mr. Lodge: I rise to a question of order. I understood that the call of the roll had begun.

Mr. Sheppard: I was on the floor and addressing the Chair.

Mr. McKellar: No answer had been made on the call of the roll. The name of the Senator from Arizona [Mr. Ashurst] had been called, but he was not here.

The Vice President: The first name on the roll has been called, but there was no response.

. . . . . .

[fol. 647] Filled Milk

The Presiding Officer: The question is on the motion of the Senator from North Dakota [Mr. Ladd] that the Senate proceed to the consideration of the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce.

Mr. Heflin: Mr. President, I suggest the absence of a quorum.

The Presiding Officer: The Secretary will call the roll.

The principal legislative clerk called the roll, and the following Senators answered to their names:

Ashurst	Broussard
Bayard	Calder
Borah	Cameron
Brookhart	Capper

Caraway
Couzens
Cummins
Curtis
Dial
Dillingham
Edge
Ernst
Fletcher
Felinghuysen
George
Gerry
Glass
Gooding
Hale
Harreld
Harris
Harrison
Heflin
Hitchcock
Johnson
Jones, N. Mex.
Jones, Wash.
Kellogg
Kendrick
Keyes
Ladd
La Follette
Lenroot
Lodge
McCormick
McCumber
McKellar
McKinley
McLean
McNary
Moses
New
Norbeck
Norris
Oddie
Overman
Page
Pepper
Phipps
Pittman
Poindexter
Ransdell
Reed, Pa.
Robinson
Sheppard
Shields
Shortridge
Smith
Smoot
Spencer
Sterling
Sutherland
Swanson
Townsend
Wadsworth
Walsh, Mass.
Walsh, Mont.
Warren
Watson
Weller
Williams
Willis

The Presiding Officer: Seventy-six Senators having answered to their names, a quorum is present.

The question is on the motion of the Senator from North Dakota [Mr. Ladd], to proceed to the consideration of House bill 8086, known as the filled milk bill. The yeas and nays have been ordered.

Mr. Dial: Mr. President, I understand the shipping bill is at an end and will not be brought up any more during this

session. Therefore we are at liberty to vote now as we see proper with reference to other legislation. The motion now pending is to take up the so-called filled milk bill. To my mind the legislation is unnecessary, and certainly at this late day in the session will take up considerable time and create a great deal of discussion. I do not deem it of any great importance one way or the other.

Mr. Lenroot: Mr. President, will the Senator yield?

Mr. Dial: Certainly.

Mr. Lenroot: I would like to remind the Senator that the shipping bill is still before the Senate but will be displaced if the pending motion prevails.

Mr. Dial: But we could displace it by taking up any other business.

Mr. Lenroot: Any matter that is taken up would displace it. The point I wanted to make is that the shipping bill is still before the Senate.

Mr. Dial: I understand that; but it will not be seriously pressed again.

Mr. Lenroot: Of course, no other motion can be made until the pending motion is disposed of.

Mr. Dial: I understand the parliamentary situation, and I am going to ask Senators to vote down the pending motion. That is the way to get rid of it, as I understand it.

We have a great many bills on the calendar. Probably every Senator is interested in getting some of the bills passed. I myself have some bills that I am anxious to get disposed of at this session if possible. If the filled milk bill is taken up I have a very important amendment which I propose to offer and which no doubt will provoke a great deal of discussion. I do not deem that the discussion would be out of place at all, because I think it would be very enlightening to the country. It would also help to educate the people along lines upon which I am very desirous of having them better posted.

Therefore I think the Senate ought to know beforehand that if the filled milk bill is taken up it will consume considerable time, possibly a day or two. We ought to vote down the motion and proceed with the calendar where we left off this afternoon. I hope the motion will be voted down and that we may proceed with the calendar.

The Presiding Officer: The question is on the motion of the Senator from North Dakota [Mr. Ladd] to proceed to

the consideration of the so-called filled milk bill, on which the yeas and nays have been ordered. The Secretary will call the roll.

The reading clerk proceeded to call the roll.

Mr. Edge (when his name was called): I have a general pair with the senior Senator from Oklahoma [Mr. Owen]. Not having been able to secure a transfer, I withhold my vote.

Mr. Lodge (when his name was called): On this question my general pair, the senior Senator from Alabama [Mr. Underwood], has a special pair with the Senator from New Mexico [Mr. Bursum]. I am therefore at liberty to vote. I vote "yea."

The roll call was concluded.

Mr. Ernst: I have a general pair with the senior Senator from Kentucky [Mr. Stanley]. I transfer that pair to the senior Senator from Maryland [Mr. France] and vote "yea."

Mr. Swanson (after having in the affirmative): I have a pair to-day with the senior Senator from Michigan [Mr. Townsend]. I understand that he would vote as I have voted, so I let my vote stand.

The Presiding Officer (Mr. Willis, after having voted in the affirmative): The present occupant of the chair is paired with the senior Senator from Ohio [Mr. Pomerene]. He transfers that pair to the senior Senator from Minnesota [Mr. Nelson], and permits his vote to stand.

Mr. Pepper: Mr. President, I merely wish to say that the vote I have cast in opposition to the pending motion is not because of any opposition to the filled milk bill, which I heartily favor and for which I shall vote, but merely in conformity with my position that the ship subsidy bill should not be disposed of otherwise than by voting it up or down.

Mr. Curtis: I wish to announce the following pairs:

The Senator from West Virginia [Mr. Elkins] with the Senator from North Carolina [Mr. Simmons];

The Senator from Colorado [Mr. Nicholson] with the Senator from Missouri [Mr. Reed];

The Senator from New Mexico [Mr. Bursum] with the Senator from Alabama [Mr. Underwood];

The Senator from Delaware [Mr. Ball] with the senior Senator from Florida [Mr. Fletcher];

The Senator from Rhode Island [Mr. Colt] with the junior Senator from Florida [Mr. Trammell]; and
[fol. 648] The Senator from New Jersey [Mr. Edge] with the Senator from Oklahoma [Mr. Owen].

The result was announced—yeas 63, nays 7, as follows:

Yeas—63

Ashurst	McKellar
Borah	McKinley
Brookhart	McNary
Cameron	Moses
Capper	Norbeck
Couzens	Norris
Cummins	Oddie
Curtis	Overman
Dillingham	Page
Ernst	Pittman
Fletcher	Poindexter
Frelinghuysen	Ransdell
George	Reed, Pa.
Glass	Robinson
Gooding	Sheppard
Hale	Shields
Harreld	Shortridge
Harris	Smith
Harrison	Spencer
Heflin	Sterling
Hitchcock	Sutherland
Johnson	Swanson
Jones, N. Mex.	Townsend
Jones, Wash.	Wadsworth
Kellogg	Walsh, Mass.
Kendrick	Walsh, Mont.
Keyes	Warren
Ladd	Watson
La Follette	Weller
Lenroot	Williams
Lodge	Willis
McCormick	

Nays—7

Bayard	Dial
Calder	Gerry

Nays—7—Continued

New	Phipps
Pepper	

Not Voting—26

Ball	McLean
Brandegee	Myers
Broussard	Nelson
Bursum	Nicholson
Caraway	Owen
Colt	Pomerene
Culberson	Reed, Mo.
Edge	Simmons
Elkins	Smoot
Fernald	Stanfield
France	Stanley
King	Trammell
McCumber	Underwood

So the motion was agreed to; and the Senate, as in Committee of the Whole, proceeded to consider the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce, which had been reported from the Committee on Agriculture and Forestry with amendments.

Mr. Ladd: I ask that the formal reading of the bill be dispensed with, that the bill be read for amendment, and that the committee amendments be first considered.

The Presiding Officer: Is there objection to the request of the Senator from North Dakota? The Chair hears none, and it is so ordered.

Mr. Dial: Mr. President, I send to the desk an amendment to the pending bill.

The Presiding Officer: The Chair advises the Senator from South Carolina that under the order just made committee amendments are to be first considered.

Mr. Dial: I do not ask for the present consideration of the amendment. I merely ask that it be printed and lie on the table.

The Presiding Officer: The amendment will be printed and lie on the table.

Nomination of Senator New to be Postmaster General

Mr. Harrison: Mr. President, on yesterday there came before the Senate the nomination of the junior Senator from

Indiana [Mr. New] to be Postmaster General of the United States. The Senate did the very appropriate thing in confirming that nomination quickly and unanimously in open executive session. I am quite sure that the nomination of Senator New for Postmaster General is pleasing not only to all his colleagues on this side of the aisle but to every Member of the Senate. No Senator in this body has more warm personal friends than has the distinguished junior Senator from Indiana. The President by this appointment shows a feeling of personal gratitude as well as party appreciation.

As a member of the minority, I wish to say that it delighted me to see the nomination come in. I am sure that the Senator will continue to reflect credit on his State, as he has done heretofore, as well as upon his colleagues with whom he has served in the Senate. We wish for him success and happiness in his new public service.

[fol. 649] Filled Milk

Mr. Stanley: Mr. President, this matter should be called to the attention of the Senate and of the leader of the minority.

The method of legislation upon which we are about to enter is, in my humble opinion, an evidence either of gross carelessness or of a lack of moral courage in facing an issue.

Here is a bill, H. R. 8086, which on its face is essentially commendable. A hurried reading of the bill would lead one to believe that it was an honest attempt to prevent the sale of adulterated milk. It is no such thing. As drawn, it is a plain attempt to utilize the dread powers of legislation to destroy one business in order to foster another.

This bill, after a long and complex definition of what filled milk is and how it may be sold, declares in section 2:

It is hereby declared that filled milk, as herein defined, is an adulterated article of food, injurious to the public health, and its sale constitutes a fraud upon the public.

The sale of this filled milk is not regulated; it is absolutely prohibited, notwithstanding the fact that I can find nothing in the record which indicates that any constituent of this so-called filled milk is deleterious or unwholesome, that it contains anything positively injurious or poisonous. The

most that can be said of it is that it is less deleterious than the natural milk.

Mr. Robinson: Will the Senator yield?

Mr. Stanley: Yes.

Mr. Robinson: I understand the proponents of the bill claim that a fraud is perpetrated in the sale of filled milk as milk; that, as a matter of fact, it is a mixed, not to say an adulterated, article; that if is used in an attempt to nourish infants; and that to infants it proves deleterious. I understand that to be the theory upon which the proponents of the bill proceed.

Mr. Stanley: It is claimed it is deleterious to infants because the filled milk is lacking in vitamines which the natural milk contains. But here is the point: Instead of providing, as everybody is willing to provide, that this milk shall not be sold unless it plainly indicates what it contains, and is plainly differentiated from the other milk, or that it shall not be sold at all if it is deleterious to health, the bill provides that because it is not quite as good a food for infants as some other food a man shall go to the penitentiary for so many years and pay a thousand dollars fine for making it and selling it at all.

In the course of the hearing the proponents of the bill called Dr. Joseph Goldberger, of the Public Health Service, who is a scientist of recognized ability. He said:

I tried to inform myself as well as I could by reading this bill that this committee is considering, and it seems there are one or two things about it that perhaps it might be proper for me to express an opinion about. One of those is the word "deleterious," qualifying an article of food, subsection C of section 1.

In my judgment that would not be a correct use of the word deleterious. From what little I know about such food I would say that such food is a wholesome and nutritious article of food and that in the usual conventional use of the word deleterious that would not be a proper qualification of it.

Mr. Dial: Mr. President——

The Presiding Officer (Mr. Reed of Pennsylvania in the chair): Does the Senator from Kentucky yield to the Senator from North Carolina.

Mr. Stanley: I yield.

Mr. Dial: I call the Senator's attention to the fact that the proponents of this bill stated they might have to make this very article, according to their own representation.

Mr. Stanley: It appears it is a fight between two manufacturers of filled milk. There is every evidence of it.

Mr. Dial: They said they might have to go into making this very article, showing it is not deleterious.

Mr. Stanley: There is nothing in the hearings to show it is deleterious; yet the Senate of the United States solemnly agrees that at 5 o'clock they will take this up, with other bills in the way prior to that time, and that when it is taken up no amendment may be discussed, but that the bill and all amendments thereto must be voted on immediately. It is unworthy of the Senate to grind legislation through in that way without it being understood, without it being digested, and with a deliberate attempt to prevent the Senate knowing what it is doing. For if the Senate persists in tying its hands in this way it will cease to be a deliberative body.

Mr. Dial: Mr. President——

Mr. Stanley: I yield.

[fol. 650] Mr. Dial: I would like to ask the Senator if he thinks Congress can pass a law declaring an article to be deleterious when it is not deleterious or injurious to health and keep it out of interstate commerce when it is not inherently deleterious?

Mr. Stanley: It is absurd for the Senate to say a thing is deleterious when there are not three chemists in the body. It is a judicial question. Instead of prohibiting the sale of deleterious foods we are to declare by law what is deleterious without any knowledge on the subject whatever and refuse to discuss it.

What business is it of the Senate to pass upon technical and scientific questions? After a while we will be saying how long skirts shall be and when they are decent or when they are deleterious, and Congress will solemnly pass an act that if a woman wears a skirt more than 18 inches from the ground, or wears a dress more than 8 inches from the top of her shoulder, it is not moral. The exercise of that authority is a reductio ad absurdum.

I represent a State where dairy farming is a great industry. I have every desire to encourage this great industry. There are no filled-milk makers in Kentucky. I would have every incentive to support this amendment were I looking

simply to that which is popular. Nevertheless I shall not hesitate to express my disapproval of this character of legislation enacted in this sort of way.

A bill prohibiting the use of an imitation milk not plainly marked in such a way as to show it is such imitation would be laudable. A bill prohibiting the making of filled milk or prepared milk which contains any deleterious substance, and providing heavy penalties for that sort of thing, would meet and should meet the approval of every honest and patriotic man in the Senate; but this is not legislation of that character. It is invoking the power of Congress to destroy a business, whether it is legitimate or not, whether it is making a wholesome or a deleterious food or not, by declaring the food unwholesome by fiat of law.

Doctor Goldberger, of the Public Health Service, in further discussing this matter, speaking of this very filled milk as not containing vitamines for babies, was asked:

Doctor, if orange juice were added to the filled milk in feeding the baby, would that make up for the deficiency in vitamine A?

Doctor Goldberger: Not entirely, because orange juice is not especially rich in that vitamine, although it is rich in some of the others, for instance, the antiscurvy vitamine. But if tomato juice is added, as is done now in children feeding, that would contribute very materially to supplying that. But one might say this, that there is no particular necessity for using this preparation in infant feeding, and I am not aware that it is being urged for infant feeding, any more than one might say white bread is urged exclusively in infant feeding. It has its place.

Mr. President, under this precedent I can destroy the cottonseed industry in the South. I can utterly annihilate it. People are selling olive oil every day that is cottonseed oil, and the chemists can be found who will say that the cottonseed oil has less nutritive value than olive oil.

It is a tremendous thing for the Congress of the United States to declare that an article in the market is unwholesome and deleterious, without any proof to support it; to declare it by fiat of law, and then refuse to discuss the matter when it gets ready to enact such legislation.

The bill in itself is not of any special importance. It will put a few filled milk dealers out of business; but the character of this legislation, the intent and purpose and spirit of

it, the use of the lawmaking power to regulate business to-day, to destroy business to-morrow, to foster business the next day, is an ever-growing menace. Every day ingenious men are finding new ways and new hooks and new crooks to invoke the power of Congress, either to destroy or to subsidize some business, and it is time that sort of thing should stop, and it should be challenged whenever it is attempted.

The Presiding Officer (Mr. Reed of Pennsylvania in the chair): The hour of 5 o'clock having arrived, under the unanimous consent agreement the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce is before the Senate as in Committee of the Whole and will be read for action on the committee amendments.

The reading clerk proceeded to read the bill. The first amendment of the Committee on Agriculture and Forestry was, on page 2, lines 8, 9, and 10, to strike out "and as such is an adulterated and deleterious article of food, and when marketed as such constitutes a fraud upon the public," and to insert in lieu thereof the following:

This definition shall not include any distinctive proprietary food compound not readily mistaken in taste for milk or cream or for evaporated, condensed, or powdered milk or cream: *Provided*, That such compound (1) is prepared and designed for feeding infants and young children and customarily used on the order of a physician; (2) is packed in individual cans containing not more than 16½ ounces and bearing a label in bold type that the content is to be used only for said purpose; (3) is shipped in interstate or foreign commerce exclusively to physicians, wholesale and retail druggists, orphan asylums, child-welfare associations, hospitals, and similar institutions and generally disposed of by them.

So as to make the first section read:

That whenever used in this act—

(a) The term "person" includes an individual, partnership, corporation, or association;

(b) The term "interstate or foreign commerce" means commerce (1) between any State, Territory, or possession, or the District of Columbia, and any place outside thereof; (2) between points within the same State, Territory, or possession, or within the District of Columbia, but through

any place outside thereof; or (3) within any Territory or possession, or within the District of Columbia; and

"(c) The term "filled milk" means any milk, cream, or skimmed milk, whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated, to which has been added, or which has been blended or compounded with, any fat or oil other than milk fat, so that the resulting product is in imitation or semblance of milk, cream, or skimmed milk, whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated. This definition shall not include any distinctive proprietary food compound not readily mistaken in taste for milk or cream or for evaporated, condensed, or powdered milk or cream: *Provided*, That such compound (1) is prepared and designed for feeding infants and young children and customarily used on the order of a physician; (2) is packed in individual cans containing not more than 16½ ounces and bearing a label in bold type that the content is to be used only for said purpose; (3) is shipped in interstate or foreign commerce exclusively to physicians, wholesale and retail druggists, orphan asylums, child-welfare associations, hospitals, and similar institutions and generally disposed of by them.

Mr. Stanley: Is it in order to offer an amendment to the second section of the bill at this time?

The Presiding Officer: It is not yet in order. The question is on agreeing to the amendment of the committee just read.

The amendment was agreed to.

The next amendment of the Committee on Agriculture and Forestry was, on page 2, line 23, after "Sec. 2," to insert the following:

It is hereby declared that filled milk, as herein defined, is an adulterated article of food, injurious to the public health, and its sale constitutes a fraud upon the public—

So as to make the section read:

Sec. 2. It is hereby declared that filled milk, as herein defined, is an adulterated article of food, injurious to the public health, and its sale constitutes a fraud upon the public. It shall be unlawful for any person to manufacture within any Territory or possession, or within the District

of Columbia, or to ship or deliver for shipment in interstate or foreign commerce, any filled milk.

The Presiding Officer: Does the Senator from Kentucky wish now to offer an amendment to the first part of the section?

Mr. Stanley: To the whole paragraph. I want to offer an amendment to strike out all of the language just read and to amend the rest of the section so it would read as follows:

It shall be unlawful for any person to manufacture within any Territory or possession, or within the District of Columbia, or to ship or deliver for shipment in interstate or foreign commerce any filled milk which is deleterious or contains any deleterious constituent, or which can be mistaken for natural milk, without being so plainly marked or labeled as to distinguish it from such article.

The Presiding Officer: Where does the Senator wish to insert that language?

Mr. Stanley: I want to strike out everything now in section 2 and insert what I have offered.

The Presiding Officer: The committee amendment to section 2 has not yet been acted upon by the Senate as in Committee of the Whole.

Mr. Stanley: I am offering this language in lieu of the committee amendment. I want to strike out section 2 as proposed by the committee.

The Presiding Officer: The Senate, as in Committee of the Whole, has not yet acted on the committee amendment to section 2, and until the committee amendment has been acted on it can not be stricken out.

Mr. Stanley: Mr. President, a point of order.

The Presiding Officer: The Senator from Kentucky will state the point of order.

Mr. Stanley: I offer what I have offered in lieu of section 2 as reported by the committee.

The Presiding Officer: The Chair is of the opinion that the committee amendment must first be acted upon before the Senator's amendment is in order.

Mr. Robinson: Mr. President, a point of order.

The Presiding Officer: The Senator will state the point of order.

Mr. Robinson: If the committee amendment is agreed to, it would then be impossible for the Senator from Kentucky to offer his amendment. I suggest that it is in order for the Senator from Kentucky to offer a substitute for the committee amendment and submit whatever amendment he chooses to submit. It is in order to perfect the committee amend- [fol. 651] ment before voting upon the committee amendment. Otherwise there would be no opportunity to amend the committee amendment.

The Presiding Officer: If the Senator offers his amendment as an amendment to the committee amendment, it is now in order.

Mr. Stanley: I offer it as an amendment to the committee amendment.

Filled Milk

The Senate, as in Committee of the Whole, resumed the consideration of the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce.

The Presiding Officer: The question is on the amendment offered by the Senator from Kentucky [Mr. Stanley] in the nature of a substitute for the amendment reported by the Committee on Agriculture and Forestry in section 2. The Secretary will state the amendment which is proposed by the Senator from Kentucky to the committee amendment.

The Reading Clerk: On page 2, line 23, after the words "SEC. 2," the committee propose to insert:

It is hereby declared that filled milk, as herein defined, is an adulterated article of food, injurious to the public health, and its sale constitutes a fraud upon the public.

In lieu of which the Senator from Kentucky [Mr. Stanley] proposes to insert:

It shall be unlawful for any person to manufacture within any Territory or possession of the United States or within the District of Columbia, or to ship or deliver for shipment in interstate or foreign commerce any filled milk which is deleterious or contains any deleterious constituents or which may be mistaken for natural milk with

out being so plainly marked or labeled as to distinguish it from such article.

Mr. Stanley: Mr. President, I ask for the yeas and nays on the amendment to the amendment.

Mr. Lenroot: I rise to a parliamentary inquiry.

The Presiding Officer: The Senator from Wisconsin will state it.

Mr. Lenroot: May I ask in what form the amendment of the Senator from Kentucky proposes to strike out the committee amendment?

The Presiding Officer: The Senator from Kentucky proposes to strike out the amendment to section 2 as proposed by the committee and to substitute therefor the words which have just been read by the reading clerk.

Mr. Lenroot: I call the attention of the Chair——

Mr. Brandegee: Debate is out of order.

Mr. Robinson: I suggest to the Senator from Wisconsin that while a parliamentary question could be raised to that procedure——

Mr. Lenroot: Very well, I will make the point of order. [fol. 652] Mr. Robinson: It would be more convenient to vote on a single amendment than on two amendments. The Senator from Kentucky has offered an amendment in the nature of a substitute for the committee amendment. The Senator can make the point of order if he chooses to do so.

Mr. Stanley: I offer my amendment as a substitute for the committee amendment.

Mr. Lenroot: I make the point of order that the Senator's amendment is to strike out the entire section, and therefore is not a substitute for the committee amendment.

Mr. Stanley: I offer my amendment in lieu of the committee amendment.

Mr. Lenroot: I rise to another parliamentary inquiry, Mr. President. Does the amendment as proposed by the Senator from Kentucky strike out all of the text of the House provision?

The Presiding Officer: It does.

Mr. Lenroot: Then I make the point of order against the amendment.

The Presiding Officer: The point of order is sustained.

Mr. Stanley: No; my amendment does not propose to strike out any of the text to the House provision. If my

amendment is agreed to, the House provision would be retained as it is now found in the last clause of the section.

The Presiding Officer: The Chair now understands that the Senator from Kentucky proposes to strike out only the words inserted by the committee?

Mr. Stanley: Yes.

The Presiding Officer: And to insert in lieu thereof the amendment which has been read?

Mr. Stanley: Exactly.

Mr. Lenroot: And leave the House text as it stands?

Mr. Robinson: The Senator may offer an amendment later to that if he desires to do so.

The Presiding Officer: The question is on the amendment offered by the Senator from Kentucky to the amendment of the committee.

Mr. Stanley: On that I ask for the yeas and nays.

The yeas and nays were ordered.

The reading clerk proceeded to call the roll, and Mr. Ashurst voted in the negative when his name was called.

Mr. Harreld: If it is not too late, I should like to ask to have the amendment to the amendment again read.

The Presiding Officer: It is too late, a Senator having responded to his name on the roll call.

The call of the roll was resumed.

Mr. Fernald (when his name was called): I have a general pair with the senior Senator from New Mexico [Mr. Jones]. In his absence I withhold my vote, being unable to secure a transfer of the pair.

Mr. Harrison (when his name was called): On this vote I am paired with the senior Senator from California [Mr. Johnson], and therefore withhold my vote.

Mr. Lodge (when his name was called): I have a general pair with the Senator from Alabama [Mr. Underwood], but he is paired, I understand, on this bill and all amendments with the Senator from New Mexico [Mr. Bursum]. Therefore I am at liberty to vote, and I vote "nay."

Mr. McCumber (when his name was called): I have a pair with the junior Senator from Utah [Mr. King]. Not knowing what his vote would be on this question, I withhold my vote.

Mr. McKinley (when Mr. ——'s name was called): I am paired with the junior Senator from Arkansas [Mr. Caraway], who has not voted, and therefore I withhold my vote.

Mr. Swanson (when his name was called): The senior Senator from Michigan [Mr. Townsend] is detained from the Senate on account of illness. I am paired with him for the day. Not knowing how he would vote on this amendment, I withhold my vote.

Mr. Watson (when his name was called): I transfer my general pair with the senior Senator from Mississippi [Mr. Williams] to the junior Senator from Vermont [Mr. Page], and vote "nay."

Mr. Willis (when his name was called): I am paired with my colleague, the senior Senator from Ohio [Mr. Pomerene]. I transfer that pair to the junior Senator from Oregon [Mr. Stanfield], and vote "nay."

The roll call was concluded.

Mr. Edge: I am paired with the senior Senator from Oklahoma [Mr. Owen]. I am unable to secure a transfer of that pair. If permitted to vote, I should vote "yea."

Mr. Bursum: Upon this question I am paired with the senior Senator from Alabama [Mr. Underwood]. If he were present he would vote "yea." If I were permitted to vote, I should vote "nay."

Mr. Curtis: I wish to announce the following pairs:

The Senator from West Virginia [Mr. Elkins] with the Senator from North Carolina [Mr. Simmons];

The Senator from Colorado [Mr. Nicholson] with the Senator from Missouri [Mr. Reed]; and

The Senator from Minnesota [Mr. Nelson] with the Senator from Texas [Mr. Culberson].

The result was announced—yeas 19, nays 43, as follows:

Yeas—19

Bayard	Overman
Brandegee	Phipps
Broussard	Pittman
Dial	Robinson
Dillingham	Sheppard
George	Shields
Gerry	Smith
Glass	Stanley
Harreld	Wadsworth
Heflin	

Nays—43

Ashurst
Borah
Brookhart
Calder
Cameron
Capper
Cummins
Curtis
Ernst
France
Frelinghuysen
Gooding
Hale
Hitchcock
Jones, Wash.
Kellogg
Kendrick
Keyes
Ladd
La Follette
Lenroot
Lodge
McCormick
McKellar
McLean
McNary
Moses
New
Norbeck
Norris
Oddie
Pepper
Reed, Pa.
Shortridge
Spencer
Sterling
Sutherland
Walsh, Mass.
Walsh, Mont.
Warren
Watson
Weller
Willis

Not Voting—34

Ball
Bursum
Caraway
Colt
Couzens
Culberson
Edge
Elkins
Fernald
Fletcher
Harris
Harrison
Johnson
Jones, N. Mex.
King
McCumber
McKinley
Myers
Nelson
Nicholson
Owen
Page
Poindexter
Pomerene
Ransdell
Reed, Mo.
Simmons
Smoot
Stanfield
Swanson
Townsend
Trammell
Underwood
Williams

So the amendment of Mr. Stanley to the amendment of the committee was rejected.

The Presiding Officer: The question now is on the amendment reported by the committee.

Mr. Brandegee: Mr. President, as I understand, the motion of the Senator from Kentucky was to strike out and insert?

Mr. Stanley: Yes.

Mr. Brandegee: I move to strike out the following language in section 2, beginning in line 23:

It is hereby declared that filled milk, as herein defined, is an adulterated article of food, injurious to the public health, and its sale constitutes a fraud upon the public.

Mr. Robinson: Mr. President, I call the Senator's attention to the fact that that is a committee amendment which has not as yet been agreed to, and the parliamentary status is——

Mr. Brandegee: I appreciate that we can accomplish the same purpose by voting against the committee amendment.

Mr. Robinson: The same result can be accomplished by voting against the committee amendment.

Mr. Brandegee: I withdraw my amendment.

The Presiding Officer: The question is on the adoption of the committee amendment.

The amendment was agreed to.

The Presiding Officer: The bill is still before the Senate as in Committee of the Whole and open to amendment.

Mr. Dial: Mr. President, I offer the amendment which I send to the desk.

The Presiding Officer: The amendment will be stated.

The Reading Clerk: On page 3, at the end of paragraph 3, it is proposed to insert the following, to be known as paragraph 4:

That the second subdivision of section 5 of the United States cotton futures act, approved August 11, 1916, as amended, is amended to read as follows:

"Second. (a) Specify as the class of the contract one of the following classes:

"Class A, which shall include only middling fair, strict good middling, good middling, and strict middling grades;

"Class B, which shall include only strict middling; mid-

dling, strict low middling, and good middling yellow tinged grades;

"Class C, which shall include only strict low middling, low middling, strict middling yellow tinged, and good middling yellow stained grades.

"(b) Specify the basis grade for the cotton involved in the contract, which shall be one of the grades for which standards are established by the Secretary of Agriculture, and which shall be one of the grades included within a class in paragraph (a) of this subdivision; the price per pound at which the cotton of such basis grade is contracted to be bought or sold; the date when the purchase or sale was made; and the month or months in which the contract is to be fulfilled or settled.

"(c) If no other class is specified in the contract, or in the memorandum evidencing the same, the contract shall be deemed a class B contract.

"(d) If no other basis grade be specified in the contract, or in the memorandum evidencing the same, good middling shall be deemed the basis grade incorporated into a class A [fol. 653] contract, middling shall be deemed the basis grade incorporated into a class B contract, and low middling shall be deemed the basis grade incorporated into a class C contract. It is further specified that in case delivery is demanded or cotton is tendered at least one-third of each contract shall be filled in the basic grades specified herein, and that the other two-thirds shall be filled either in that grade or in one of the other grades specified in said class."

That the third subdivision of section 5 of such act is amended to read as follows:

"Third. Provide that the cotton dealt with therein or delivered thereunder shall be of or within the grades for which standards are established by the Secretary of Agriculture and of or within the grades included within the class so specified or incorporated as the class of the contract and that cotton of any other grade or grades shall not be dealt with therein nor delivered thereunder."

That the fifth subdivision of section 5 of such act, as amended, is amended to read as follows:

"Fifth. Provide that cotton that, because of the presence of extraneous matter of any character or irregularities

or defects, is reduced in value below that of strict middling in the case of a class A contract, strict low middling in the case of a class B contract, or low middling in the case of a class C contract, the grades mentioned being of the official cotton standards of the United States, or cotton that is less than seven-eighths of an inch in length of staple, or cotton of perished staple or of immature staple, or cotton that is 'gin cut' or reginned, or cotton that is 'repacked' or 'false packed' or 'mixed packed' or 'water packed,' shall not be delivered on, under, or in settlement of such contract."

That the second paragraph of the seventh subdivision of section 5 of such act, as amended, is amended to read as follows:

"The provisions of the third, fourth, fifth, sixth, and seventh subdivisions of this section shall be deemed fully incorporated into any such contract if there be written or printed thereon, or on the memorandum evidencing the same, at or prior to the time the same is signed, the phrase 'subject to United States cotton futures act, section 5, class A', if the contract is a class A contract, or the phrase 'subject to United States cotton futures act, section 5, class B', if the contract is a class B contract, or the phrase 'subject to United States cotton futures act, section 5, class C,' if the contract is a class C contract."

That the provisions of this act shall be effective on and after the thirtieth day after its passage, but such provisions shall not be construed as applicable to nor as affecting any right, power, privilege, or immunity under any contract entered into prior to such day.

The Presiding Officer: The question is on the amendment proposed by the Senator from South Carolina.

Mr. Dial: I ask for the yeas and nays.

The yeas and nays were ordered, and the reading clerk proceeded to call the roll.

Mr. Fernald (when his name was called). Making the same announcement as before, I withhold my vote.

Mr. McCumber (when his name was called): Making the same announcement with reference to my pair as on the previous vote, I withhold my vote.

Mr. McKinley (when his name was called): Has the junior Senator from Arkansas [Mr. Caraway] voted?

The Presiding Officer: That Senator has not voted.

Mr. McKinley: I withhold my vote.

Mr. Swanson (when his name was called): Making the same announcement that I made on the previous vote, I withhold my vote.

Mr. Watson (when his name was called): Making the same announcement as before, I vote "nay."

Mr. Willis (when his name was called): Making the same announcement as heretofore concerning the transfer of my pair, I vote "nay."

The roll call was concluded.

Mr. Edge (after having voted in the negative). I transfer my pair with the senior Senator from Oklahoma [Mr. Owen] to the junior Senator from Washington [Mr. Poindexter] and will allow my vote to stand.

Mr. Bursum: On this question I am paired with the junior Senator from Alabama [Mr. Underwood]. If I were at liberty to vote, I should vote "nay."

Mr. Harris: I have a pair with the Senator from New York [Mr. Calder], and withhold my vote.

The result was announced—yeas 7, nays 50, as follows:

Yeas—7

Borah	Overman
Dial	Shields
Harreld	Stanley
Jones, Wash.	

Nays—50

Bayard	Hale
Brandegee	Heflin
Brookhart	Kellogg
Bronssard	Kendrick
Cameron	Keyes
Capper	Ladd
Cummins	La Follette
Curtis	Lenroot
Edge	Lodge
Ernst	McCormick
Frelinghuysen	McKellar
Gerry	McLean
Glass	McNary
Gooding	Moses

New	Smith
Norris	Spencer
Oddie	Sterling
Pepper	Sutherland
Phipps	Wadsworth
Pittman	Walsh, Mass.
Ransdell	Walsh, Mont.
Reed, Pa.	Warren
Robinson	Watson
Sheppard	Weller
Shortridge	Willis

Not Voting—39

Ashurst	McCumber
Ball	McKinley
Bursum	Myers
Calder	Nelson
Caraway	Nicholson
Colt	Norbeck
Couzens	Owen
Culberson	Page
Dillingham	Poindexter
Elkins	Pomerene
Fernald	Reed, Mo.
Fletcher	Simmons
France	Smoot
George	Stanfield
Harris	Swanson
Harrison	Townsend
Hitchcock	Trammell
Johnson	Underwood
Jones, N. Mex.	Williams
King	

So Mr. Dial's amendment was rejected.

Mr. Brandegee: Mr. President, I desire to give notice that I shall ask for a separate vote on the committee amendment in section 2 when the bill gets to the Senate.

The Presiding Officer: The bill is still before the Senate as in Committee of the Whole and open to amendment. If no further amendment is proposed, the bill will be reported to the Senate.

The bill was reported to the Senate as amended.

The Presiding Officer: The question is on agreeing to the amendments made as in Committee of the Whole except the one on which the Senator from Connecticut [Mr. Brandegee] has asked for a separate vote.

Mr. Stanley: I give notice that I shall also ask the Senate to vote upon an amendment to the same paragraph.

Mr. Brandegee: Mr. President, a parliamentary inquiry. As I understand, in section 2, if Senators will look at the bill, the committee amendment is that part of section 2 which is in italics.

The Presiding Officer: The Chair so understands.

Mr. Brandegee: Very well. Would it be in order to move to strike out that part of section 2 which is in italics, which is the committee amendment, or is the question on concurring in the committee amendment?

The Presiding Officer: The question as the Chair understands, is on concurring in the amendment in section 2, which was made as in Committee of the Whole.

Mr. Brandegee: And a motion to strike that out would not be in order?

Mr. Lodge: Mr. President, the question is on concurring in the amendment. The Senator from Connecticut gave notice that he would reserve that. Therefore that amendment is before the Senate, and of course it is open to a perfecting motion, exactly like any other amendment at any other stage.

The Presiding Officer: But the first question before the Senate, the Chair understands, is on the adoption of the committee amendments other than the one as to which the Senator has given his notice.

Mr. Lodge: There is some confusion about what the amendment consists of.

The Presiding Officer: The Chair understands that it is the first sentence in section 2, which is printed in italics.

Mr. Brandegee: Have the other amendments agreed to as in Committee of the Whole been concurred in in the Senate?

The Presiding Officer: They have not. The Chair was about to put the question.

Mr. Wadsworth: Mr. President, I think the Senator from Kentucky [Mr. Stanley] just a moment ago gave notice that he desired a separate vote on his amendment. Am I right?

Mr. Stanley: Yes.

Mr. Wadsworth: We are up to it now. His amendment comes first.

Mr. Lodge: I think we had better be clear as to just what we are doing. Is the first amendment the amendment on lines 8, 9, and 10, to strike those lines from the House bill? Is that the first amendment?

The Presiding Officer: The Chair understands that the first amendment is the striking out of the matter in struck-through type in lines 10, 11, and 12, and the insertion in lieu thereof of the matter in italics in lines 12 to 24.

Mr. Lodge: The Chair, then, has a bill in which the numbering is different from mine. It must be a different print.

The Presiding Officer: The print the Chair has is that reported from the committee.

Mr. Lodge: I have the correct print now. I have just received a fresh one. In that case the amendment begins on line 8 with the word "and"; it strikes out a portion of line 8, the whole of line 9, and the whole of line 10 but one word, and inserts from line 10, page 2 down to line 22.

The Presiding Officer: The Chair so understands.

Mr. Lodge: That is the first amendment.

Mr. Smith: Mr. President, will the Senator read the words? I have here a copy that seems to be different.

Mr. Lodge: The committee moves to strike out, beginning on line 8, after the word "desiccated," the words "and as such is an adulterated and deleterious article of food, and when marketed as such constitutes a fraud upon the public," and to insert: "This definition shall not include any distinctive proprietary food compound not readily mistaken in taste"—that word "intesta" is a misprint—"in taste for milk or cream or for evaporated, condensed, or powdered [fol. 654] milk, or cream; *Provided*, That such compound (1) is prepared and designed for feeding infants and young children and customarily used on the order of a physician; (2) is packed in individual cans containing not more than 16½ ounces and bearing a label in bold type that the content is to be used only for said purpose; (3) is shipped in interstate or foreign commerce exclusively to physicians, wholesale and retail druggists, orphan asylums, child-welfare associations, hospitals, and similar institutions and generally disposed of by them."

That ends the first amendment.

Mr. Smith: Has the Senator offered an amendment to this provision?

Mr. Lodge: No; I am not offering an amendment to it. The Senator from Kentucky reserved the right to offer an amendment to it. The amendment of the Senator from Connecticut [Mr. Brandegee] would come next. It is an amendment to section 2 which reads:

It is hereby declared that filled milk, as herein defined, is an adulterated article of food, injurious to the public health, and its sale constitutes a fraud upon the public.

Those words the Senator from Connecticut proposes to strike out.

Mr. Smith: What is the amendment now proposed? Does the Senator from Kentucky offer an amendment to the first section?

Mr. Stanley: The Senator from Kentucky offers to insert after the words "filled milk" the following words——

Mr. Brandegee: What line?

Mr. Stanley: Line 4, page 3.

Mr. Lodge: We have not reached that as yet.

Mr. Stanley: It is a part of section 2.

Mr. Lodge: That is not a part of the amendment. It is a further amendment, which the Senator will have a perfect right to offer.

Mr. Stanley: I will offer the amendment when we have acted on the one now before the Senate.

Mr. Lodge: The Senator has an entire right to offer that amendment.

Mr. Brandegee: Mr. President, a parliamentary inquiry.

The Vice President: The gentleman will state his inquiry.

Mr. Lodge: The question is on the request of the Senator from Connecticut for a separate vote on his motion to strike out section 2.

Mr. Stanley: I give notice that when the amendment of the Senator from Connecticut has been acted on I will ask in the Senate to amend section 2 by adding, after the word "milk," on line 4, page 3, the following words:

Which is deleterious or injurious, or contains any injurious or deleterious ingredients, or which is not so marked or labeled as to plainly distinguish it from natural milk.

Mr. McCormick: A parliamentary inquiry.

The Vice President: The Senator will state his inquiry.

Mr. McCormick: Have we disposed of subsection (c)?

The Vice President: That has not yet been disposed of. The question is on concurring in the amendment on page 2 and included in subsection (c).

The amendment was concurred in.

Mr. Brandegee: Now I desire to submit a parliamentary inquiry.

The Vice President: The Senator will state his inquiry.

Mr. Brandegee: As in Committee of the Whole, the committee agreed to the committee amendment contained in section 2, which is indicated in italics. Is it in order to move to strike that out, the bill now being in the Senate, or is the question simply on concurring in the committee amendment?

The Vice President: The question is on concurring in the amendment in section 2.

Mr. Smith: I move to strike that out.

Mr. Brandegee: That is not in order. If the Senate does not concur, it would be equivalent to striking it out. I ask for the yeas and nays.

The yeas and nays were ordered, and the reading clerk proceeded to call the roll.

Mr. McCumber (when his name was called): I have a general pair with the junior Senator from Utah [Mr. King], who is absent from the Chamber, and not knowing what his vote would be upon this amendment, I withhold my vote.

Mr. McKinley (when his name was called): I have a pair with the junior Senator from Arkansas [Mr. Caraway]. In his absence from the Chamber, not knowing how he would vote, I withhold my vote.

Mr. Swanson (when his name was called): I have a pair with the senior Senator from Michigan [Mr. Townsend], and not knowing how he would vote on this amendment, I withhold my vote.

Mr. Watson (when his name was called): Making the same announcement as before, I vote "nay."

Mr. Willis (when his name was called): I am paired with my colleague [Mr. Pomerene]. I transfer that pair to the junior Senator from Oregon [Mr. Stanfield], and vote "yea."

The roll call was concluded.

Mr. Edge: Making the same announcement as before as to the transfer of my pair, I vote "nay."

The result was announced—yeas 36, nays 25, as follows:

Yeas—36

Ashurst	McCormick
Borah	McKellar
Brookhart	McNary
Cameron	Moses
Capper	Norbeck
Cummins	Norris
Curtis	Oddie
Frelinghuysen	Pepper
Gooding	Reed, Pa.
Hale	Shields
Hitchcock	Shortridge
Jones, Wash.	Spencer
Kellogg	Sterling
Kendrick	Sutherland
Keyes	Walsh, Mass.
Ladd	Walsh, Mont.
La Follette	Weller
Lenroot	Willis

Nays—25

Bayard	Lodge
Brandegee	New
Broussard	Overman
Calder	Phipps
Dial	Pittman
Dillingham	Robinson
Edge	Sheppard
Ernst	Smith
George	Stanley
Gerry	Wadsworth
Glass	Warren
Harreld	Watson
Heflin	

Not Voting—35

Ball	Caraway
Barsum	Colt

Couzens	Nicholson
Culberson	Owen
Elkins	Page
Fernald	Poindexter
Fletcher	Pomerene
France	Ransdell
Harris	Reed, Mo.
Harrison	Simmons
Johnson	Smoot
Jones, N. Mex.	Stanfield
King	Swanson
McCumber	Townsend
McKinley	Trammell
McLean	Underwood
Myers	Williams
Nelson	

So the amendment was agreed to.

Mr. Pittman: I offer an amendment, to strike out, on page 1, commencing with line 9, the numeral "(2)" and the words "between points within the same State, Territory, or possession, or within the District of Columbia, but through any place outside thereof." It is the provision which prevents commerce inside of a State.

Mr. Lodge: I ask that the amendment be stated.

The Vice President: The Secretary will state the amendment.

The Reading Clerk: On page 1 strike out, beginning with line 9, as follows:

(2) between points within the same State, Territory, or possession, or within the District of Columbia, but through any place outside thereof"—

And the semicolon.

The Vice President: The question is on agreeing to the amendment.

Mr. Wadsworth: May I ask the Senator if he has a situation of this kind in mind——

Mr. Norris: Mr. President, debate is not in order.

The Vice President: No debate is in order.

Mr. Wadsworth: I accept the rebuke.

The Vice President: The question is on agreeing to the amendment offered by the Senator from Nevada.

The amendment was rejected.

The Vice President: The question is, Shall the amendments be engrossed and the bill be read a third time?

The amendments were ordered to be engrossed and the bill to be read a third time.

The bill was read the third time and passed.

* * * * * * *

[fol. 655] Message from the House.

A message from the House of Representatives, by Mr. Overhue, its enrolling clerk, announced that the House had agreed to the amendments of the Senate to the bill (H. R. 8086) to prohibit the shipment of filled milk in interstate or foreign commerce.

* * * * * * * *

[fol. 656] Supreme Court of the United States

Order Allowing Certiorari—Filed April 3, 1944.

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Fourth Circuit is granted, limited to the first four questions presented by the petition.

And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

[fol. 657] In the Supreme Court of the United States

Stipulation as to Printed Record—Filed April 12, 1944

It is hereby stipulated and agreed, by and between the attorneys for the respective parties hereto, that for the purpose of the hearing on the merits in the above-entitled cause, the printed record shall consist of the following:

1. The Appendix to the petitioners' brief in the United States Circuit Court of Appeals for the Fourth Circuit.

2. The proceedings had before the United States Circuit Court of Appeals for the Fourth Circuit.

3. Defendants' Exhibits 12 and 13, and the Defendants' Exhibits for Identification numbered 23B, 24B, 25B, 26B, 27B and 28B.

It is further stipulated and agreed that either of the parties hereto may refer in his brief to any unprinted portion of the certified transcript of record now on file with the Clerk of this Court.

Charles Fahy, Solicitor General. Samuel H. Kaufman, Attorney for Petitioners.

[fol. 657a] [File endorsement omitted].

[fol. 658] IN THE SUPREME COURT OF THE UNITED STATES

STIPULATION AS TO PRINTED RECORD—Filed May 4, 1944

It is hereby stipulated and agreed by and between the attorneys for the respective parties hereto that the stipulation heretofore entered into on April 12, 1944 with regard to the printed record in the above entitled cause be deemed amended as follows:

The following portions of defendant's exhibits for identification 25-B and 28-B need not be printed:

As to defendant's Exhibit for Identification 25-B:

Page 1444, line 2, to the bottom of the first column, lines 1 to 6 and lines 13 to the bottom of the second column;

Page 7580—all of the first column, lines 1 to 46 of the second column;

Page 7619—line 17 to the bottom of the first column and all of the second column;

Page 7669—all of the first column, lines 1 to 41 of the second column;

Page 7670—lines 35 to the bottom of the second column;

[fol. 659] Page 5241—all of the first column, lines 1 to 42, and line 49 to the bottom of the second column;

Page 5554—all of the first column, lines 1 to 27, line 29 to 59, and line 62 to the bottom of the second column;

Page 5555—all of the first column, lines 1 to 44 and line 50 to the bottom of the second column;

Page 5556—lines 1 to 28 and line 31 to bottom of the first column and all of the second column;

As to defendant's Exhibit for Identification 28-B:

Page 2176, lines 1 to 31 and line 71 to the bottom of the first column and all of the second column;

Page 3949, lines 1 to 57 of the first column;

Page 3954—last 19 lines of the first column, and all of the second column;

Page 3961—lines 1 to 34 of the first column—line 51 to bottom of second column;

Page 3962—last 37 lines of second column;

Page 3965—all of the first and second columns;

Page 3966—all of the first and second columns;

Page 3967—lines 1 to 54 of the first column;

Page 3969—last 33 lines of the first column, and all of the second column;

Page 3970—all of the first and second columns;

Page 3971—all of the first column, and all of the second column, except the last 32 lines;

Page 3974—line 43 to the bottom of the second column;

Page 4851—all of the first column, except the last 37 lines;

Page 4852—last 17 lines of the first column and all of the second column;

[fol. 660] Page 4981—all of the first column and lines 1 to 4 of the second column;

Page 4983—lines 8 to the bottom of the first column and lines 1 to 45 of the second column;

Page 4986—last 22 lines of the second column;

Page 5075—lines 1 to 45 and line 52 to the bottom of the first column and all of the second column.

Dated: New York, N. Y., May 3rd, 1944.

Charles Fahy, Solicitor General. Samuel H. Kaufman, Attorney for Petitioners.

[fol. 661] [File endorsement omitted.]

Endorsed on cover: File No. 48167, U. S. Circuit Court of Appeals, Fourth Circuit. Term No. 21. Carolene Products Company, Charles Hauser and William H. Hartke, Petitioners, v. The United States of America. Petition for writ of certiorari and exhibit thereto. Filed February 7, 1944. Term No. 21 O. T. 1944.

(2461)

SUPREME COURT OF THE UNITED STATES.

No. 21.—October Term, 1944.

Carolene Products Company, Charles Hauser and William H. Hartke, Petitioners,
vs.
The United States of America.

On Writ of Certiorari to the United States Circuit Court of Appeals for the Fourth Circuit.

[November 6, 1944.]

Mr. Justice Reed delivered the opinion of the Court.

The limited writ of certiorari in this case was granted to review petitioners' conviction, affirmed by the Circuit Court of Appeals, for a violation of the Filled Milk Act.[1] The Court was moved to allow the petition in order to examine the contentions that the accused articles of food cannot, under the due process clause of the Fifth Amendment to the Constitution, be banned from commerce when these compounds are nutritionally sufficient and not "in imitation or semblance" of milk or any milk product within the meaning of the statute and are not sold as milk or a milk product.

The contentions which are raised by petitioners to avoid their conviction were not dealt with in our prior decision which upheld the act's validity upon demurrer to an earlier indictment which charged its violation. *United States* v. *Carolene Products Co.*, 304 U. S. 144.[2] Since these issues are important to those affected by the act, certiorari was granted. 321 U. S. 760. Questions of due process under the Fourteenth Amendment, similar to those presented here, had arisen from state filled milk legislation with varying results.[3] Consideration by this Court of the filled milk

[1] Act of March 4, 1923, 42 Stat. 1486; United States v. Carolene Products Co., et al., 51 F. Supp. 675; Carolene Products Co., et al. v. United States, 140 F. 2d 61; Carolene Products Co., et al. v. United States, 321 U. S. 760.

[2] Cf. Carolene Products Co. v. Evaporated Milk Association, 93 F. 2d 202. Carolene Products Co. v. Wallace, 307 U. S. 612, 308 U. S. 506, here on appeal, we affirmed the refusal of the trial court to grant an interlocutory final decree which would enjoin prosecution of the corporate petitioner for alleged violation of the Filled Milk Act. The affirmance was based on a lack of necessity for equitable intervention to protect the Carolene Products Co. from criminal prosecution.

legislation of Kansas appears in *Sage Stores et al.* v. *Kansas*, No. 34, this Term, decided today.

The facts which are undisputed are fully set out in the opinions of the District Court and the Circuit Court of Appeals. It is sufficient for our purposes to summarize them as follows. The corporate petitioner sells the products mentioned in the indictment which are manufactured for it by another corporation from skim milk, that is, milk from which a large percentage of the butterfat has been removed. The process of manufacture consists of taking natural whole milk, extracting the butterfat content and then adding cottonseed or cocoanut oil and fish liver oil which latter oil contains vitamins A and D. The process includes pasteurization of the milk, evaporation, homogenization of the mixture and sterilization. The compound is sold under various trade names in cans of the same size and shape as those used for evaporated milk. The contents of the can are practically indistinguishable by the buying public from evaporated whole milk, but the cans are truthfully labeled to show the trade names and the ingredients.

The indictment charged the petitioner corporation and the individual petitioners, its president and vice-president, with violation of the statute by making interstate shipments of the compounds contrary to Section 2.[4] The convictions and sentences are assailed as improper on three grounds: first, that the petitioner's compounds were not covered by the rationale of the Filled Milk Act; second, that the Act did not cover the compounds, because they were not "in imitation or semblance" of a milk product; and third, that since the compounds were wholesome food products and sold without fraud, in any sense, Congress could not constitutionally prohibit their interstate shipment.

First. As a basis for petitioner's position that the Filled Milk Act does not cover their compounds, it is argued that the nutri-

[4] Cases which sustained the validity of state acts against attacks which were based on the due process clause of the Fourteenth Amendment were: Carolene Products Co. v. Harter, 329 Pa. 49; Carolene Products Co. v. Mohler, 152 Kans. 2, 3; Carolene Products Co. v. Hanrahan, 291 Ky. 417, 421; State v. Sage Stores Co., 157 Kans. 404, 412, 413, par. 5.

Contra: The People v. Carolene Products Co., 345 Ill. 166; Carolene Products Co. v. Thomson, 276 Mich. 172; Carolene Products Co. v. Ringling, 131 Neb. 429.

"Sec. 2. . . . It shall be unlawful for any person . . . to ship or deliver for shipment in interstate or foreign commerce any filled milk.

"Sec. 3. Any person violating any provision of this Act shall upon conviction thereof be subject to a fine of not more than $1,000 or imprisonment of not more than one year, or both; . . ." 42 Stat. 1487.

tional deficiencies of filled milks led to the Act's enactment so as to protect the public health. These deficiencies occurred because the extraction of the butterfat from the whole milk removed a large proportion of the fat soluble vitamins A and D. The hearings on the bill and the course of the debate make it quite clear that this vitamin deficiency was of major importance in bringing about the enactment of the act.[5] Petitioners then offered in the trial court to prove that since the passage of the Filled Milk Act in 1923, the technique of fortification of foods with vitamins A and D had advanced to a point where these vitamins could be restored to skim milk compounds so that the compounds were equally valuable in that respect to whole milk products and that their products had been so enriched. The offer was refused.

Filled milk is defined in Section 1 (c) of the act as any milk, "whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated, to which has been added, or which has been blended or compounded with, any fat or oil other than milk fat, so that the resulting product is in imitation or semblance of milk . . ., whether or not condensed, evaporated, concentrated, powdered, dried, or desiccated." The petitioner's compounds, it is agreed, fall within this definition. But, petitioners contend, they do not fall within its spirit, since the vitamins which cause deficiency have been restored and that therefore the act is inapplicable to the enriched compounds within that rule of statutory construction, as illustrated by *Church of the Holy Trinity v. United States*, 143 U. S. 457; *United States* v. *Aetna Explosives Co.*, 256 U. S. 402, and other cases, which excludes from the coverage of a statute things or situations which are beyond the legislative intent.

Petitioners' position as to the legislative purpose of the act was not accepted by the trial or reviewing court. We agree with those courts. While, as we have stated above, the vitamin deficiency was an efficient cause in bringing about the enactment of the Filled Milk Act, it was not the sole reason for its passage. A-

[5] United States v. Carolene Products Co., 304 U. S. 144, 149. H. Rep. No. 355, 67th Cong., 1st Sess., pp. 3-4; S. Rep. No. 987, 67th Cong., 4th Sess., pp. 3-4; 62 Cong. Rec. pp. 7581, 7616; Hearings, House Committee on Agriculture, H. Res. 6215, 67th Cong., 1st Sess., Vol. I, pp. 144, 176-77; Hearings, Senate Sub-Committee of the Committee on Agriculture and Forestry, H. Res. 8086, 67th Cong., 2d Sess., Vol. I, pp. 27, 48, 67, 89-90, 121-24, 143, 157, 226, 266.

second reason was that the compounds lend themselves readily to substitution for or confusion with milk products. Although, so far as the record shows, filled milk compounds as enriched are equally wholesome and nutritious as milk with the same content of calories and vitamins, they are artificial or manufactured foods which are cheaper to produce than similar whole milk products. When compounded and canned, whether enriched or not, they are indistinguishable by the ordinary consumer from processed natural milk. The purchaser of these compounds does not get evaporated milk. This situation has not changed since the enactment of the act. The possibility and actuality of confusion, deception and substitution was appraised by Congress.[6] The prevention of such practices or dangers through control of shipments in interstate commerce is within the power of Congress. *United States* v. *Carolene Products Co.*, 304 U. S. at p. 148; cf. *McCray* v. *United States*, 195 U. S. 27, 63. The manner by which Congress carries out this power, subject to constitutional objections which are considered hereinafter in part "Third" of this opinion, is within legislative discretion,[7] even though the method chosen is prohibition of manufacture, sale or shipment.[8] Congress evidently determined that exclusion from commerce of filled milk com-

[6] H. Rep. No. 355, 67th Cong., 1st Sess., p. 2: "The compound can be made more cheaply than the regular article. . . . Filled milk is sold under various trade names. . . . The manufacturers can not sell it as milk, but it is put up in the same size cans as regular condensed milk, and the evidence before the committee shows that it is advertised by the retail dealers as milk and evaporated milk. Storekeepers sell it with the statements that it takes the place of milk,' 'just as good as condensed and much cheaper,' 'nothing better on the market,' 'takes the place of condensed milk.' Instances have been found in which the coconut fat was mixed with milk and sold for cream; the compound has been used for making ice cream. . . . In many cases retailers sell the compound for the same price as the straight evaporated milk, although the price per 1 pound can to them is about 3 cents less. A number of surveys in various parts of the country show that the compound is sold largely in sections inhabited by people unable to read English and sections inhabited by people of limited means, and not sold at all in better residential districts." Cf. also S. Rep. No. 987, 67th Cong., 4th Sess., p. 2.

[7] Jacob Ruppert v. Caffey, 251 U. S. 264, 299-301; Milliken v. United States, 283 U. S. 15, 24. Cf. Purity Extract Co. v. Lynch, 226 U. S. 192, 204; Sterling v. Constantin, 287 U. S. 378, 398.

[8] See Nebbia v. New York, 291 U. S. 502, 528, note 26. To the cases there cited may be added Patterson v. Kentucky, 97 U. S. 501, upholding the constitutional validity of a state statute prohibiting the sale of oils or fluids which can be used for illuminating purposes if such oils or fluids ignite or permanently burn below 130 degrees Fahrenheit; Price v. Illinois, 238 U. S. 446, establishing the constitutionality of a state statute prohibiting the sale of a food preservative that contained formaldehyde, hydrofluoric acid, boric acid and salicylic acid; United States v. Hill, 248 U. S. 420, prohibiting by Federal statute the transportation of liquor into a state whose laws forbade only

pounds in the semblance of milk was an appropriate method to strike at evils which it desired to suppress. Although it now is made to appear that one evil, the nutritional deficiencies, has been overcome, the evil of confusion remains and Congress has left the statute in effect. It seems to us clear, therefore, that there is no justification for judicial interference to withdraw these assumedly nondeleterious compounds from the prohibitions of the act. It follows from the point of view of the coverage of the act that it was not erroneous to refuse to consider the evidence which petitioners offered as to the wholesomeness of the compounds.

Second. The petitioners urge another reason why the act does not cover their compounds. This ground is that the compounds are not "in imitation or semblance" of milk within the meaning of the act's definition of filled milk. Section 1(c), *supra*, p. 3. Compare *State* v. *Carolene Products Co.*, 346 Mo. 1049, 1060-62. We agree that the product must be in imitation or semblance of milk to fall within the prohibition of the act.

Petitioners rely upon the admitted fact that no ingredient is added to the skim milk, oil and vitamins to alter the appearance of the compound. Accepting the evidence that the compounds are indistinguishable from whole milk products by purchasers, it is urged that they cannot be held to be in "imitation or semblance" of milk unless the manufacturer purposefully adds something to make the mixture simulate milk. It is said Congress adopted this language from § 64(3) of the Farms and Markets Law of New York.[9] Prior to that time, the Court of Ap-

manufacture and sale; Crescent Cotton Oil Co. v. Mississippi, 257 U. S. 129, validating a state statute prohibiting a corporation from owning or operating a cotton gin when also interested in the manufacture of cottonseed oil or cottonseed meal; Whitfield v. Ohio, 297 U. S. 431, holding valid a state statute which prohibited the sale in open market of goods manufactured by convicts or prisoners; Henderson Co. v. Thompson, 300 U. S. 258, upholding the validity of a state statute prohibiting the use of sweet natural gas for the manufacture of carbon black (see also Walls v. Midland Carbon Co., 254 U. S. 300); and Federal Security Administrator v. Quaker Oats Co., 318 U. S. 218, holding valid an administrative regulation prohibiting manufacture of "farina" enriched solely with vitamin D.

[9] Sec. 64(3). "No person shall manufacture, sell or exchange, offer or expose for sale or exchange, or have in his possession with the intent to sell or exchange any condensed, evaporated, concentrated, powdered, dried or desiccated milk, cream or skimmed milk to which there has been added, or with which there has been mixed, blended or compounded, any fats or oils, other than milk fat, so that the finished product shall be in imitation or semblance of condensed, evaporated, concentrated, powdered, dried or desiccated milk." N. Y. Laws 1922, ch. 365, § 64, as amended.

peals of New York, in construing the words "imitation or semblance" as they appeared in another section of the New York law directed at the regulation of oleomargarine, had interpreted them as denouncing trade in oleomargarine only when the manufacturer consciously and purposefully attempted to create an imitation or semblance of milk products. *People* v. *Guiton*, 210 N. Y. 1, 8, 9. The adoption of these words after this interpretation and in the face of the Congressional knowledge of the New York decision and of the controversy over the effect of the use of such language,[10] petitioners contend, brings into play the general rule that adoption of the wording of a statute from another legislative jurisdiction, carries with it the previous judicial interpretations of the wording. *Willis* v. *Eastern Trust & Banking Co.*, 169 U. S. 295, 307; cf. *James* v. *Appel*, 192 U. S. 129, 135; *Joines* v. *Patterson*, 274 U. S. 544, 549.

The cases just cited have established under suitable conditions the rule for which petitioners contend that the interpretation goes with the act. It is a presumption of legislative intention, however, which varies in strength with the similarity of the language, the established character of the decisions in the jurisdiction from which the language was adopted and the presence or lack of other indicia of intention. *Copper Queen Mining Co.* v. *Arizona Board*, 206 U. S. 474, 479; *Whitney* v. *Fox*, 166 U. S. 637, 647.

Here we cannot be sure that Congress, deliberately or otherwise, adopted the wording from the New York statute. In § 2 of the Federal act of August 2, 1886, 24 Stat. 209, taxing and regulating oleomargarine, somewhat similar language occurs.[11] That may be the source of the phrase. Furthermore the *Guiton* case did not interpret the section of the New York statute upon which petitioners contend the Federal act is modeled. In the *Guiton* case,

[10] Hearings, Senate Sub-committee of the Committee on Agriculture and Forestry, H. Res. 8086, 67th Cong., 2d Sess., pp. 219, 221-22, 248-49.

[11] "SEC. 2. That for the purposes of this act certain manufactured substances, certain extracts, and certain mixtures and compounds, including such mixtures and compounds with butter, shall be known and designated as 'oleomargarine', namely: All substances heretofore known as oleomargarine, oleo, oleomargarine oil, butterine, lardine, suine, and neutral; all mixtures and compounds of oleomargarine, oleo, oleomargarine oil, butterine, lardine, suine, and neutral; all lard extracts and tallow extracts; and all mixtures and compounds of tallow, beef fat, suet, lard, lard oil, vegetable oil annotto, and other coloring matter, intestinal fat, and offal fat made in imitation or semblance of butter, or when so made, calculated or intended to be sold as butter or for butter." 24 Stat. 209.

the Court of Appeals explained the force of "imitation and semblance" as used in the oleomargarine section, § 38, N. Y. Laws 1909, ch. 9. That court relied upon the special statutory definition of oleomargarine in § 30, *id.*, as a reason for its conclusion that the words prohibited only conscious imitation, 210 N. Y. 7. Oleomargarine was there defined as an article "in the semblance of butter." The court thought that as the sale of natural oleomargarine, which might have the "semblance" of butter was permitted, it was not intended to prohibit products which looked like butter unless the imitation came from choice. As no corresponding definition of filled milk occurs, there could be no certainty that the same result would be reached, if New York had been called upon to interpret section 64.

Finally, as determininative of the intention of Congress to include compounds whose resemblance to milk products arises from their ingredients and not from conscious effort, we note the fact that compounds of this innocent character were specifically included by name in the list of compounds which the Congressional reports pointed out as products which were covered by the proposed act.[12] Petitioner's compounds were themselves so named. The addition of vitamins does not affect their physical likeness to milk products.

Third. If the Filled Milk Act is applicable to the compounds whose shipment was the basis of the indictment in this case, as we have just concluded, petitioners assert that the act, as thus applied, violates the due process clause of the Fifth Amendment. Their argument runs in this manner. Since these enriched compounds are admittedly wholesome and sold under trade names with proper labels without the commission of any fraud by petitioners on the public, Congress cannot prohibit their interstate shipment without denying to petitioners a right protected by the due process clause, the right to trade in innocent articles. They rely upon *Weaver* v. *Palmer Bros. Co.*, 270 U. S. 402, and continue their protest against the refusal of the trial court to receive the evidence as to the wholesomeness of their product.

We do not need to consider the refusal of the trial court to receive evidence of the purity and wholesomeness of petitioner's products. Such evidence could be material only if the sole basis

[12] S. Rep. No. 987, 67th Cong., 4th Sess., p. 3; H. Rep. No. 355, 67th Cong., 1st Sess., p. 2; 64 Cong. Rec. pp. 3951, 7593.

for Congressional action was impurity and unwholesomeness.[13] Under the first point of this opinion, we have determined that the avoidance of confusion furnished a reason for the enactment of the Filled Milk Act. The trial court took judicial notice, as did the District Court of the District of Columbia, *United States* v. *Carolene Products Co.*, 51 F. Supp. 675, 678-79, and as we do, of the reports of the committees of the House of Representatives and the Senate which show that other considerations than nutritional deficiencies influenced the prohibition of the shipment of filled milk in interstate commerce. These unchallenged reports as we indicated in part "First" above, furnish an adequate basis, other than unwholesomeness, for the action of Congress.[14] The reports show that it was disputable as to whether wholesome filled milk should be excluded from commerce because of the danger of its confusion with the condensed or evaporated natural product or whether regulation would be sufficient. The power was in Congress to decide its own course. We need look no further.[15]

Weaver v. *Palmer Bros.*, *supra*, is not to the contrary. This Court thought that under the facts of that record there was no reasonable basis for the legislative determination that the use of shoddy in comfortables was dangerous to the public health or that it offered opportunity for deception, pp. 412 and 414. Therefore the prohibition of its use violated the due process clause of the Fourteenth Amendment. Sterilization, inspection and labeling were deemed to be sufficient to negative the possibility of such evils. It was pointed out in the course of the opinion, p. 413, that where the possibility of evil was not negatived, legislation prohibiting the sale of a wholesome article would not be invalidated. *Powell* v. *Pennsylvania*, 127 U. S. 678. In dealing with the evils

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[13] See American Law Institute, Model Code of Evidence, ch. 9, Rules 801, 802, 803, pp. 319-22; Bikle, Judicial Determination of Questions of Fact Affecting the Constitutional Validity of Legislative Action, 38 Harv. L. Rev. 6; Note, The Presentation of Facts Underlying Constitutionality of Statutes, 49 Harv. L. Rev. 631; Morgan, Judicial Notice, 57 Harv. L. Rev. 269, 291-94; Note, 30 Col. L. Rev. 260; Wigmore, Evidence (3d Ed.), Sec. 2555(d), p. 522; Borden's Co. v. Baldwin, 293 U. S. 194, 209; United States v. Carolene Products Co., 304 U. S. 144, 153-54.

[14] West India Oil Co. v. Domenech, 311 U. S. 20, 28; United States v. Stewart, *id.*, 50, 64; Neuberger v. Commissioner, *id.*, 83, 85-86, n. 1; Milk Wagon Drivers' Union v. Lake Valley Co., *id.*, 91, 101-103; Comm'n v. Broadcasting Station, *id.*, 132, 137; Tate v. Helvering, *id.*, 195, 197, n. 4.

[15] Cf. Zahn v. Board of Public Works, 274 U. S. 325, 328; Sproles v. Binford, 286 U. S. 374, 388-89; Osborn v. Nebraska, 313 U. S. 236, 246.

of filled milk, Congress reached the conclusion that labeling was not an adequate remedy for deception. On the point of the constitutionality in relation to due process of the prohibition of trade in articles which are not in themselves dangerous but which make other evils more difficult to control, such as confusion in the filled milk legislation, the *Powell* case is authority for the validity of Congressional action in the Filled Milk Act. It involved a sale of an article assumed to be just as good as butter but which was prohibited because of its ingredients. In the *Powell* case, the Court said:

"The defendant then offered to prove by Prof. Hugo Blanck that he saw manufactured the article sold to the prosecuting witness; that it was made from pure animal fats; that the process of manufacture was clean and wholesome, the article containing the same elements as dairy butter, . . . that the oleaginous substances in the manufactured article were substantially identical with those produced from milk or cream; and that the article sold to the prosecuting witness was a wholesome and nutritious article of food, in all respects as wholesome as butter produced from pure unadulterated milk or cream from unadulterated milk." Pp. 681-82.

"It will be observed that the offer in the court below was to show by proof that the particular articles the defendant sold and those in his possession for sale, in violation of the statute, were, in fact, wholesome or nutritious articles of food. It is entirely consistent with that offer that many, indeed, that most kinds of oleomargarine butter in the market contain ingredients that are or may become injurious to health. The court cannot say, from anything of which it may take judicial cognizance, that such is not the fact. . . .

"Whether the manufacture of oleomargarine, or imitation butter, of the kind described in the statute, is, or may be, conducted in such a way, or with such skill and secrecy, as to baffle ordinary inspection, or whether it involves such danger to the public health as to require, for the protection of the people, the entire suppression of the business, rather than its regulation in such manner as to permit the manufacture and sale of articles of that class that do not contain noxious ingredients, are questions of fact and of public policy which belong to the legislative department to determine. And as it does not appear upon the face of the statute, or from any facts of which the court must take judicial cognizance, that it infringes rights secured by the fundamental law, the legislative determination of those questions is conclusive upon the courts." Pp. 684-85.

In *Hebe Co.* v. *Shaw*, 248 U. S. 297, this Court in 1919 upheld the validity of an Ohio statute which prohibited the sale of condensed milk made otherwise than from whole milk against an attack under the Fourteenth Amendment. It was assumed that the compound was wholesome and it was properly labeled. The act was sustained, however, as a proper exercise of legislative power to protect the public against fraudulent substitution. pp. 302-303. *Purity Extract Co.* v. *Lynch*, 226 U. S. 192, 204.

In the action of Congress on filled milk there is no prohibition of the shipment of an article of commerce merely because it competes with another such article which it resembles. Such would be the prohibition of the shipment of cotton or silk textiles to protect rayon or nylon or of anthracite to aid the consumption of bituminous coal or of cottonseed oil to aid the soybean industry. Here a milk product, skimmed milk, from which a valuable element—butterfat—has been removed is artificially enriched with cheaper fats and vitamins so that it is indistinguishable in the eyes of the average purchaser from whole milk products. The result is that the compound is confused with and passed off as the whole milk product in spite of proper labeling.

When Congress exercises a delegated power such as that over interstate commerce, the methods which it employs to carry out its purposes are beyond attack without a clear and convincing showing that there is no rational basis for the legislation, that it is an arbitrary fiat.[18] This is not shown here. The judgment is

Affirmed.

Mr. Justice BLACK and Mr. Justice DOUGLAS concur in the result.

[18] United States v. Carolene Products Co., 304 U. S. 144, 153-54; Hebe Co. v. Shaw, 248 U. S. 297, 304; Mann v. Illinois, 94 U. S. 113, 132; S. C. Hwy. Dept. v. Barnwell Bros., 303 U. S. 177, 191-92; Carmichael v. Southern Coal Co., 301 U. S. 495, 509; Townsend v. Yeomans, 301 U. S. 441, 451; O'Gorman & Young v. Hartford Ins. Co., 282 U. S. 251, 257-58; Hamilton v. Kentucky Distilleries Co., 251 U. S. 146, 163; Bacon v. Van Dyke & Lewis, 240 U. S. 342, 357.